2130.0.1 INTRODUCTION

Effective March 1, 1983, the Board issued an amended bank holding company policy statement entitled ''Futures, Forward and Options on U.S. Government and Agency Securities and Money Market Instruments.'' Bank holding companies are now required to furnish written notification to their District Federal Reserve Banks within 10 days after financial contract activities are begun by the parent or a nonbank subsidiary. The policy is consistent with the joint policy statement previously issued by the three federal bank regulators with regard to banks participating in financial contracts, and reflects the Board's judgment that bank holding companies, as sources of strength for their subsidiary banks, should not take speculative positions in such activities.

If a bank holding company or nonbank subsidiary is taking or intends to take positions in financial contracts, that company's board of directors should approve written policies and establish appropriate limitations to ensure that the activity is conducted in a safe and sound manner. Also, appropriate internal control and audit procedures should be in place to monitor the activity. The following discussion and inspection procedures apply to futures contract activity generally, but are intended to focus specifically on financial futures contracts. For a discussion of currency futures and options and the examination procedures for those instruments, see sections F and G in the Merchant and Investment Bank Examination Manual.

Information, instructions, and inspection procedures have been provided for verifying compliance with the Board's policy statement. It is intended that the policy statement will ensure that contract activities are conducted in accordance with safe and sound banking practices. The task of evaluating BHC contract activities is the responsibility of System examiners. The following information and inspection procedures are intended to serve as a guide for Federal Reserve Bank staff in that effort.

2130.0.2 DEFINITIONS

Basis—Basis is defined as the difference between the futures contract price and the cash market price of the same underlying security, money market instrument, or commodity.

Call Option—A contract that gives the buyer (holder) the right, but not the obligation to buy (call), a specified quantity of an underlying security, money market instrument or commodity at or before the stated expiration of the contract. At expiration, if the value of the option increases, the holder will exercise the option or close it at a profit. If the value of the option does not increase, the holder would probably let the option expire (or close it out at a profit) and, consequently, will lose the cost (premium paid) of (for) the option. Alternatively, the option may be sold prior to expiration.

Clearing Corporation—A corporation organized to function as the clearing house for an exchange. The clearing house registers, monitors, matches and guarantees trades on a futures market, and carries out financial settlement of futures transactions. The clearing house acts as the central counterparty to all trades executed on the exchange. It substitutes as a seller to all buyers and as a buyer to all sellers. In addition, the clearing corporation serves to insure that all contracts will be honored in the event of a counterparty default.

Clearing Member—A member firm of the clearing house or corporation. Membership in clearing associations or corporations is restricted to members of the respective commodity exchanges, but not all exchange members are clearing house members. All trades of a nonclearing member must be registered with, and eventually settled through, a clearing member.

Commodities Futures Trading Commission—The CFTC is a federal regulatory agency charged with regulation of futures trading in all commodities. It has broad regulatory authority over futures trading. It must approve all future contracts traded on U.S. commodity exchanges, ensure that the exchanges enforce their own rules (which it must review and approve), and direct an exchange to take any action needed to maintain orderly markets whenever it believes that an ''emergency'' exists.

Contract Activities—This term is used in this manual to refer to banking organization participation in the futures, forward, standby contract, or options markets to purchase and sell U.S. government and agency securities or money market instruments, foreign currencies and other financial instruments.

Convergence—The process by which the futures market price and the cash market price of a financial instrument or commodity converge as the futures contract approaches expiration.

Covered Call Options—This term refers to the issuance or sale of a call option where the option seller owns the underlying deliverable security or financial instrument.

Cross Hedging—The process of hedging a ''cash'' or derivative instrument position with another cash or derivative instrument that has significantly different characteristics. For example, an investor who wants to hedge the sales price of long-term corporate bonds might hedge by establishing a short position in a treasury bond or treasury bond futures contract, but since the corporate bonds cannot be delivered to satisfy the contract, the hedge would be a cross hedge. To be successful, the price movements of the hedged instrument must be highly correlated to that of the position being hedged.

Difference Check—A difference check is sent by the party which recognizes a loss when a forward contract is closed out by the execution of an offsetting forward contract pursuant to a pair-off clause. In essence, the difference check represents a net cash settlement on offsetting transactions between the same two parties and replaces a physical delivery and redelivery of the underlying securities pursuant to offsetting contracts.

Financial Contract—This term is used in the manual to refer to financial futures, forward, standby contracts, and options to purchase and sell U.S. government and agency securities, money market instruments, foreign currency futures and other financial instruments.

Firm Forward Contract—This term is used to describe a forward contract under which delivery of a security is mandatory. See ''Standby Contract'' for a discussion of optional delivery forward contracts.

Forward Contracts—Over-the-counter contracts for forward placement or delayed delivery of securities in which one party agrees to purchase and another to sell a specified security at a specified price for future delivery. Contracts specifying settlement in excess of 30 days following trade date shall be deemed to be forward contracts. Forward contracts are usually nonstandardized and are not traded on organized exchanges, generally have no required margin payments, and can only be terminated by agreement of both parties to the transaction. The term also applies to derivative contracts such as swaps, caps, and collars.

Futures Contracts—Standardized contracts traded on organized commodity exchanges to purchase or sell a specified financial instrument or commodity on a future date at a specified price. While futures contracts traditionally specified a deliverable instrument, newer contracts have been developed that are based on various indexes. Futures contracts based on indexes settle in cash and never result in delivery of an underlying instrument; some traditional contracts that formerly specified delivery of an underlying instrument have been redesigned to specify cash settlement. New financial futures contracts are continually being proposed and adopted for trading on various exchanges.

Futures Commission Merchant (FCM)—An FCM functions like a broker in securities. An FCM must register with the Commodities Futures Trading Commission (CFTC) in order to be eligible to solicit or accept orders to buy or sell futures contracts. The services provided by an FCM include a communications system for transmittal of orders, and may include research services, trading strategy suggestions, trade execution, and recordkeeping services.

Financial Futures Contracts—Standardized contracts traded on organized exchanges to purchase or sell a specified security, money market instrument, or foreign currency on a future date at a specified price on a specified date. Futures contracts on GNMA mortgage-backed securities and Treasury bills were the first interest rate futures contracts. Other financial futures contracts have been developed, including contracts on Eurodollars, currencies, and Euro-Rate differentials. It is anticipated that new and similar financial futures contracts will continue to be proposed and adopted for trading on various exchanges.

Futures Exchange—Under the Commodities Exchange Act (CEA), a ''board of trade'' designated by the Commodity Futures Trading Commission as a contract market. Trading occurs on the floor of the exchange and is conducted by open auction in designated trading areas.

GNMA or GINNIE MAE—Either term is used to refer to the Government National Mortgage Association. Ginnie Mae is a government corporation within the U.S. Department of Housing and Urban Development. In creating GNMA, Congress authorized it to grant a full faith and credit guaranty of the U.S. government to mortgage-backed securities issued by private sector organizations.

Hedge—The process of entering transactions that will protect against loss through compensatory price movement. A hedge transaction is one which reduces the organization's overall level of risk.

Initial Futures Margin—In the futures market, a deposit held by an FCM on behalf of a

client against which daily gains and losses on futures positions are added or subtracted. A futures margin represents a good-faith deposit or performance bond to guarantee a participant's performance of contractual obligations.

Interest Rate Cap—A multi-period interest rate option for which the buyer pays the seller a fee to receive, at predetermined future times, the excess, if any, of a specified floating interest rate index above a specified fixed per annum rate (cap or strike rate). Caps can be sold separately or may be packaged with an interest rate swap.

Interest Rate Collar—the combination, in single contract, of a simultaneous sale of a cap and the purchase of a floor, or, a purchase of a cap and sale of a floor. The buyer of the collar is a buyer of a cap and the seller of a floor. By selling the floor, the collar buyer gives up the possibility of benefiting from a decline in interest rates below the strike rate in the floor component. On the other hand, the fee earned in selling the floor lowers the cost of protection against interest rate reversal.

Interest Rate Floor—is the reverse of an interest rate cap. The buyer pays a premium to obtain protection against a decline in interest rates below a specified level.

Long Contract—A financial contract to buy securities or money market instruments at a specified price on a specific future date.

Long Hedge—The long hedge, also called the *anticipatory hedge* is the process by which a market participant protects a cash or risk position by buying a futures or forward contract, i.e. taking a long financial contract position.

Maintenance Margin—Maintenance margin is the minimum level to which an equity position can decline as a result of a price decline before additional margin is required. In other words, it is the minimum margin which a customer must keep on deposit with a member at all times. Each futures contract has specified maintenance margin levels. A margin call is issued when a customer's initial margin balance falls below the maintenance margin level specified by the exchange. Maintenance margin must be satisfied by the deposit of cash or agreed upon cash equivalents. The amount of cash required is that amount which is sufficient to restore the account balance to the initial margin level.

Mandatory Delivery—See "Firm Forward Contract."

Mark-to-market—The process by which the carrying value (market value or fair value) of a financial instrument is revalued, and which is recognized as the generally accepted accounting principle for determining profit or loss on securities positions in proprietary trading and investment accounts. Futures positions are typically marked-to-market at the end of each trading session.

Naked Call Option—Refers to the issuance or sale of a call option where the option seller does not own the underlying deliverable security or instrument.

Open Interest—Refers to the number of futures contracts outstanding for a given delivery month in an individual futures contracts. The mechanics of futures trading require that for every open long futures contract there is an open short futures contract. For example, an open interest of 10,000 futures contracts means that there are 10,000 long contract holders and 10,000 short contract holders.

Options Contracts—Option contracts require that the buyer of the option pay the seller (or writer) of the option a premium for the right, but not the obligation, to exercise an option to buy (call option) or sell (put option) the instrument underlying the option at a stated price (strike or exercise price) on a stated date (European style option) or at any time before or on the stated expiration date (American style option). There are also exchange traded options contracts: (1) put and call options on futures contracts that are traded on commodities exchanges; and (2) put and call options that specify delivery of securities or money market instruments (or that are cash settled) that are traded on securities exchanges. The key economic distinction between options on futures and options on securities, is that the party who exercises an option on a futures contract receives a long or short futures position rather than accepting or making delivery of the underlying security or financial instrument.

Pair-Off Clause—A pair-off clause specifies that if the same two parties to a forward contract trade should subsequently execute an offsetting trade (e.g. a long contract against an outstanding short contract), settlement can be effected by one party sending the other party a difference check rather than having physical delivery and redelivery of securities.

Par Cap—This term refers to a provision in the contract of sale for Ginnie Mae mortgage-backed securities which restricts delivery only to pools which bear an interest rate sufficiently high so that the securities would trade at or below par when computed based on the agreed to yield.

Put Option—An option contract which gives

the holder the right, but not the obligation, to sell (put) a specified quantity of a financial instrument (money market) or commodity at a specified price on or before the stated expiration date of the contract. If price of the underlying instrument occurs, the purchaser will exercise or sell the option. If a decline in price of the underlying instrument does not occur, the option purchaser will let it expire and will lose only the cost (premium paid) of (for) the option.

Round Turn—Commissions for executing futures transactions are charged on a round turn basis. A round turn constitutes opening a futures position and closing it out with an offsetting contract, i.e. executing a short contract and closing out the position with a long contract or vice-versa.

Short Contract—A financial contract to sell securities or money market instruments at a specified price on a specified future date.

Short Hedge—The process by which a customer protects a cash or risk position by selling a futures or forward contract, i.e. taking a short financial contract position. The purpose of the short hedge is to lock in a selling price.

Standby Contract—Optional delivery forward contracts on U.S. government and agency securities arranged between securities dealers and customers that do not involve trading on organized exchanges. The buyer of a standby contract (put option) acquires, upon paying a fee, the right to sell securities to the other party at a stated price at a future time. The seller of a standby (the issuer) receives the fee, and must stand ready to buy the securities at the other party's option. See the fuller discussion of Standby Contracts under 2130.0.3.1.2)

TBA (To Be Announced) Trading—TBA is the abbreviation used in trading Ginnie Mae securities for forward delivery when the pool number of securities bought or sold is ''to be announced'' at a later date.

Variation Margin—is when, in very volatile markets, additional funds are required to be deposited to bring the account back to its initial margin level, while trading is in progress. Variation margin requires that the needed funds be deposited within the hour, or when reasonably possible. If the customer does not satisfy the variation or maintenance margin call(s), the futures position is closed. Unlike initial margin, variation margin must be in cash. Also refer to ''Maintenance Margin''.

Weighted Hedge—a hedge that is used to compensate for a greater decline in the dollar value of a cash bond as compared to a price decline of an accessible T-bond futures contract.

Yield Maintenance Contract—This is a forward contract written with terms which maintain the yield at a fixed rate until the delivery date. Such a contract permits the holder of a short forward contract to deliver a different coupon security at a comparable yield.

2130.0.3 FINANCIAL CONTRACT TRANSACTIONS

Futures, forward and options contracts are merely other tools for use in asset–liability management. These contracts are neither inherently a panacea nor a speculative vehicle for use by banks and bank holding companies. Rather, the benefit or harm resulting from engaging in financial contract activities results from the manner in which contracts are used. Proper utilization of financial contracts can reduce the risks of interest or exchange rate fluctuations. On the other hand, financial contracts can serve as leverage vehicles for speculation on rate movements.

2130.0.3.1 Markets and Contract Trading

Forward contract (OTC) trading of Government National Mortgage Association (''GNMA'') or ''Ginnie Mae'' Mortgage-Backed Securities preceded exchange trading of GNMA futures contracts in 1975.

2130.0.3.1.1 Forward Contracts

Forward contracts are executed solely in an over-the-counter market. The party executing a contract to acquire securities on a specified future date is deemed to have a ''long'' forward contract; and the party agreeing to deliver securities on a future date is described as a party holding a ''short'' forward contract. Each contract is unique in that its terms are arrived at after negotiation between the parties.

For purposes of illustrating a forward contract, assume that SMC Corporation is an originator of government guaranteed mortgages and issuer of GNMA securities. SMC Corporation has a proven ability to manage and predict the volume of its loan originations over a time horizon of three to four months. To assure a profit or prevent a loss on current loan originations, SMC Corporation may enter binding over-the-counter commitments to deliver 75% of its

mortgage production which will be converted into GNMA securities three months in the future. If SMC agrees to sell $3 million of GNMA securities (11% coupon) to the WP Securities Firm at par in three months, SMC Corporation is considered to have entered a ''short'' (commitment to sell) forward contract. Conversely, WP has entered a ''long'' (commitment to buy) forward contract. The two parties to the transaction are both now obligated to honor the terms of the contract in three months, unless the contract is terminated by mutual agreement.

It should be noted that executing a ''short'' forward contract is not the same as executing the short sale of a security. Generally, a short sale of a security is understood to represent the speculative sale of a security which is not owned by the seller. The short seller either purchases the security prior to settlement date or borrows the security to make delivery; however, a ''short'' forward contract merely connotes the side of the contract required to make delivery on a future date. Short forward contracts should not be considered inherently speculative, but must be considered in light of the facts surrounding the contract.

Forward trading can be done on a mandatory delivery (sometimes referred to as ''firm forward'' contracts) basis or on an optional delivery basis (''standby'' contract). With respect to a ''mandatory'' trade, the contract can also be written with a ''pair-off'' clause. A pair-off clause specifies that if the same two parties to a trade should subsequently execute an off-setting trade (e.g., the banking organization executes a long contract against an outstanding short contract), settlement can be effected by one party sending the other party a ''difference check'' rather than having a physical delivery and redelivery of securities.

When a forward contract is executed by a dealer, a confirmation letter or contract is sent to the other party to the transaction. The contract will disclose pertinent data about the trade, such as the size of the trade, coupon rate, the date upon which final delivery instructions will be issued, and the yield at which the trade was effected. In addition, the contract letter will specify whether it is permissible for the ''short'' side of the trade to deliver a different coupon security at a comparable yield (''yield maintenance contract'') if the coupon specified in the contract is not available for delivery. Contracts which prohibit the delivery of securities requiring a premium over par are considered to have a ''par cap.'' The initial contract letter generally does not specify which specific securities (e.g., GNMA mortgage-backed securities identified by a pool number) will be delivered. Instead, such contracts generally identify the deliverable securities as having been traded on a ''TBA'' basis (''to be announced''). Prior to settlement, the dealer holding the short contract will send a final confirmation to the other party specifying the actual securities to be delivered, accrued interest, dollar price, settlement date, coupon rate, and the method of payment.

Forward contracts are not typically marked-to-market. Both parties in a forward contract are exposed to credit risk, since either party can default on its obligation.

2130.0.3.1.2 Standby Contracts

Standby contracts are ''put options'' that trade over-the-counter, with initial and final confirmation procedures that are quite similar to those on forward transactions. Standby contracts were developed to allow GNMA issuers to hedge their production of securities, especially in instances where mortgage bankers have extended loan commitments in connection with the construction of new subdivisions. When a mortgage banker agrees to finance a subdivision with conventional and government guaranteed mortgages it is difficult to predict the actual number of FHA and VA guaranteed loans which will be originated. Hence, it is risky for a GNMA issuer to enter mandatory forward contracts to deliver the entire estimated amount of loans eligible to be pooled as GNMA securities. By entering an option contract and paying a fee for the option to ''put'' securities to another party, a GNMA issuer or securities dealer obtains downside market protection, but remains free to obtain the benefits of market appreciation since it can ''walk away'' from the option contract. In addition to the flexibility of walking away and selling securities at the prevailing market price when GNMA prices are rising, a GNMA issuer avoids the potential risk of purchasing mortgages or GNMA securities to cover short forward contracts in the event that production of GNMA securities falls below anticipated levels.

When a securities dealer sells a standby contract granting a GNMA issuer the right ''to put'' securities to it, the dealer, in turn, will attempt to purchase a matching standby contract from an investor because the dealer does not want to shoulder all of the downside market risk. There

is also potential for securities firms to deal in standby contracts having no relationship to the issuance of GNMA securities.

Some illustrations of standby contracts follow. They are intended to illustrate the mechanics of a standby contract when a banking organization has sold or issued a standby contract granting the contra party the option to "put" GNMA securities to the banking organization.

Assumptions

1. Fee paid to banking organization = 1% of contract value
2. Contract delivery price = 98
3. Coupon = 12%

Situation 1

On contract exercise date: Market Price = 100. Therefore, the dealer would sell securities at market rather than put them to the bank.

Dealer		*Banking organization*	
Sale price	100	Purchase price	N/A
Fee paid	(1)	Fee Received	1
	99		1
Result: Dealer sacrificed 1% to insure sale price.		*Result:* Banking organization earned 1% fee for "standing by."	

Situation 2

On contract exercise date: Market price = 95. Therefore, dealer would deliver securities pursuant to the standby contract.

Dealer		*Banking organization*	
Sale price	98	Purchase price	98
Market price	95	Market price	95
Contract gain	3	Contract loss	(3)
Fee paid	(1)	Fee received	1
Actual gain	2	Actual loss	(2)
Result: Dealer paid 1% fee to avoid 3 point market loss.		*Result:* Banking organization received 1% fee to compensate for purchasing securities 3 points above market.	

2130.0.3.1.3 Futures Contracts

Futures Contract transactions involve three types of participants: customers—the buyers or sellers of contracts, brokers, and a futures exchange. As in the forward markets, a buyer (party committed to take delivery of securities specified in the futures contract) of a futures contract has a "long" contract and the seller (party committed to deliver the underlying securities) has a "short" contract. If a customer desires to purchase (sell) a futures contract, the broker—possibly a member of a clearing house of an exchange—will take the order to the exchange floor and purchase (sell) a contract sold (bought) by another customer (through another broker).[1] All futures transactions are made

1. Brokers in commodities are required to register as futures commission merchants ("FCMs") with the Commodities Futures Trading Commission ("CFTC") in order to be eligible to solicit or accept orders to buy or sell futures contracts.

through and carried on the books of clearing house member brokers, who are treated by the exchange as their own customers. Hence, there are always an equal number of long and short contracts outstanding, referred to as the ''open interest,'' since the auction process requires a buyer and seller for every contract.

All futures contracts are obligations of an exchange's clearing association or corporation, i.e. the clearing association is on the opposite side of each long and short contract; and all transactions are guaranteed within the resources of the exchange's clearing association (on most futures exchanges a small fee is collected on each transaction and placed into an insurance fund). Should an FCM default on a futures contract, the association pays the costs of completing the contract.

2130.0.4 MARGIN REQUIREMENTS

In order to insure the integrity of futures markets, the clearing house requires that member brokers (clearing house members) deposit initial margin in connection with new futures positions carried for the firm, other brokers or FCMs for whom the clearing house member clears transactions, and public customers. The clearing house members in turn require their customers—whether they are other FCMs or public customers—to deposit margin.[2] The FCMs generally require that public customers meet initial margin requirements by depositing cash, pledging government securities, or obtaining irrevocable standby letters of credit from substantial commercial banking organizations. Daily maintenance margin or variation margin calls (deposits of cash required to keep a certain minimum balance in the margin account) based upon each day's closing futures prices are calculated pursuant to rules of the various futures exchanges, and clearing house members are required to meet daily variation margin calls on positions carried for customers and the firm. In turn, the FCMs require customers to reimburse them for posting additional margin.

Once a customer has executed a futures contract to make or accept delivery of securities in the future it is obligated to fulfill the terms of the contract. A futures contract cannot be resold over-the-counter because futures contracts are not transferable. However, a customer may terminate its obligation under a futures contract either by making or accepting delivery of the securities as specified by the contract, or by executing an offsetting futures contract (long contract to cancel a short contract or vice-versa) with the same broker to cancel the original contract on the same exchange. The overwhelming majority of futures contracts are closed out by the execution of an offsetting contract prior to expiration.

The key to understanding futures transactions is the fact that futures contract prices on U.S. government and agency securities move in the same manner as bond prices; e.g. rising interest rates result in falling futures prices and falling interest rates result in rising futures prices. Hence, the purchase of a futures contract (''long'' futures contract) at a price of 98 will result in a loss if future market participants perceive rising interest rates in the month of contract expiration and act accordingly; then the offsetting of a futures contract (executing a ''short'' futures contract) would have to be at a lower price; e.g. 96. As in the case of any commercial transaction, the participant has a loss if the sale price is lower than the purchase price, or a gain if the sale price is higher than the purchase price.

2130.0.4.1 Variation Margin Calls

Variation margin calls for each contract and expiration month are based upon the closing futures exchange price. If there is a change from the previous day's closing prices, the long contract holders will be required to post additional margin which will be passed through via the clearing house process to short contract holders or vice-versa. Subsequent to the computation of variation margin calls, the clearing house member brokers are required to post variation margin on behalf of the clearing firm and its customer accounts prior to commencement of the next day's trading. Then, the clearing brokers call their FCM and public customers requesting more margin to bring the accounts up to the

2. In general, the futures exchanges set different initial margin requirements based upon the types of activity engaged in by the customer. Margin requirements are higher for customer contracts characterized as ''speculative'' than for those contracts deemed to be ''hedge'' positions. The commodities industry traditionally defines someone with a business need for using the futures market as a hedger; others are defined as speculators. Therefore, in instances where there are different initial hedge and speculative margin requirements, it is assumed that banking organizations will only be required to meet margin required for hedgers.

required maintenance margin level.[3] Of course, if a futures position has a gain at the end of the day, the clearing firm receives a deposit in its margin account. The firm, in turn, increases the margin account balances of customers holding contracts with gains.

For illustrative purposes, we will again assume that a customer purchased a futures contract (long contract, face value $100,000) at a price of 98. If the next closing futures price is 97, the customer will have suffered a one point margin loss (if the customer chose to offset the long contract with a short contract, the transaction would be closed out at a one point loss). Conversely, the party with a short contract executed at 98 would receive a one point margin payment to his account.

Assuming that the initial margin requirement is $1,500 and the variation margin requirement is $1,000, the following summarizes the steps followed in administering a customer's (long position) margin account in connection with the previously described transaction.

Transaction	*Margin Account Balance*
1. Deposit initial margin	$1,500
2. Purchase $100,000 contract @ 98	500
3. Day 1—Closing futures price 97 (Reduction of $1,000 in margin account to reimburse broker for posting margin with clearing corporation).	
4. FCM calls customer to request $1,000 to bring account up to required initial margin level.	
5. Reimbursement to FCM of $1,000	1,500

It is important to note that once the margin account balance falls below the variation margin level, the customer is required to deposit additional funds to replenish the account balance to the initial margin level. If there is a drop in the value of the contract which places the margin account balance below the initial margin level but above the variation margin level, the customer is not required to deposit additional margin monies. Alternatively, if there is a positive flow of margin monies the customer is free to withdraw any amount which exceeds the initial margin requirement.

The entire marking-to-the-market process is repeated at the close of the next business day using a comparison of the previous day's closing price (97) to the current closing price. (The preceding example is simplified because it implies that the customer deposits promptly the required margin. In reality, margin is not always deposited so quickly.)

In summary, futures trading is a ''zero sum game'' because of the equal number of long and short contracts outstanding, and the variation margin payments reflect this fact, i.e. for every long contract holder posting variation margin, there is a short contract holder receiving margin.

2130.0.5 THE DELIVERY PROCESS

Futures contracts are defined as ''standardized contracts traded on organized exchanges to purchase or sell a specified financial instrument or physical commodity on a future date at a specified price.'' Even when a participant keeps a contract open for delivery, the ''specified price'' (which corresponds to a specified yield) is actually obtained through a combination of past futures market gains or losses (incurred through the daily mark to market process) and the current futures market price. For invoicing purposes, the actual delivery price is based upon a closing futures market ''settlement price'' on a date designated by the exchange. In addition, the final calculation of a delivery price on a bond contract will typically involve an adjustment reflecting the fact that the coupon issue to be delivered against the contract grade (8 percent) futures contract is not an 8 percent bond. For example, when current U.S. treasury bond coupons are 12 percent it is highly unlikely that a party with a short futures position would deliver a bond with an 8 percent coupon.

2130.0.6 MECHANICS AND OPERATION OF FUTURES EXCHANGES

Certain technical factors should be noted with

3. It should be noted that public customers generally have more time to meet maintenance margin calls than do FCMs. However, if a customer fails to meet a variation margin call within three days, the FCM must take a charge against its net capital if it fails to close out the customer's contract (17 C.F.R. 1.17(c)5(viii)).

respect to futures markets. First, futures markets are not totally free markets. Rules of the exchanges put artificial constraints—daily price movement limits—upon the amount of daily market movement allowed in given types of futures contracts. For example, government securities prices in the cash market will move as far as the market participants deem necessary to reflect the ''market'' for those securities, while the futures market specifying delivery of the underlying security will be constrained from having the same potential unlimited market movement. There have been instances where persons desiring to close out a futures contract by executing an offsetting contract have been unable to do so for one or more days until the exchange's daily trading limits allowed futures prices to ''ratchet'' up or down to the level that reflected the true ''market'' price as perceived by hedgers, speculators, and arbitragers.

Although the preceding illustrates the basic nature of futures price movements, do not assume that futures and cash market prices always move in the same direction at the same velocity. Futures prices by definition predict future events, e.g., a market participant can buy a futures contract to take delivery of a three month Treasury bill two years in the future.[4] In such an instance, the holder of a long T-bill futures contract agrees to the future purchase of a government security which has not yet been issued. There is no reason to assume that a contract with a distant maturity will move in the same manner as the cash market for a three month Treasury bill. In addition, there is a relationship between the cash market price of an existing security and the price of that security in the futures market which is called the basis. The basis can vary significantly over the life of a given futures contract. In the contract delivery month, the futures market price will converge towards the cash market price (the basis approaches zero), adjusted for technical factors that reflect the costs of processing and delivering securities. If the futures market price did not converge towards the cash market price in the delivery month, the arbitragers would take offsetting futures and cash market positions to arbitrage away any profitable discrepancies between the two markets.

4. All financial futures contracts have a number of contract expiration months extending into the future. As the near term contract expires, a contract with a more distant expiration date is added.

2130.0.7 COMPARISON OF FUTURES, FORWARD, AND STANDBY CONTRACTS

Excluding the fact that futures contracts are traded on organized exchanges, there are many similarities between contracts. Conceptually, the contracts are interchangeable; each type of contract can be utilized for hedging, speculating, or arbitrage strategies, but none of the contracts are transferable to third parties. While engaging in contract activities allows the participants to either assume or shift the risks of interest rate changes associated with the security deliverable under the contract, such contracts fail to provide the other benefits of owning the underlying security. Specifically, financial contracts do not pay interest, do not have a U.S. government guaranty of payment of principal at maturity, and cannot be pledged to secure public deposits or be used as collateral for repurchase agreements. The forward markets are perceived to be delivery markets wherein there is a high percentage of delivery of the underlying security.

As in the case of other futures markets, the financial futures markets were not designed to be delivery markets. Nevertheless, there have been a number of instances when a relatively high percentage of financial futures contracts have resulted in delivery. Some persons suggest tax reasons and the deliverable supply of securities as two factors that have contributed to the much higher delivery of securities than delivery of physical commodities. It is, of course, also easier and cheaper to make delivery of securities rather than railroad carloads of grain.

Trading units on futures exchanges are standardized. The standardized trading unit in a physical commodity which may be a railroad car of grain; the typical trading unit in a government or agency security futures contract may be $100,000 or $1 million par principal at a coupon rate (on coupon issues) fixed by the exchange. On the other hand, forward and standby contracts are not traded in standardized units with given contract maturity months. Instead, forward and standby contracts are custom made to suit the needs of the two parties to the transaction.

While all contract holders are involved with market risks, the holders of forward and standby contracts are especially prone to credit risk. Unlike futures contracts where the mechanics of exchange trading provide for the futures exchange clearing association to guaranty perfor-

mance of each contract, forward and standby contracts are only as good as the entity on the other side of the contract. Anyone who reads the financial press should be aware that prior to the passage of the Government Securities Act of 1986, there were a number of defaults involving forward and standby contracts. In an effort to bring increased integrity into the unregulated forward contract markets, there has been a trend by some of the major securities dealers to require the posting of margin in connection with forward contract trading. There are no uniform margin requirements governing all aspects of forward contract trading, nor is there a uniform application of margin requirements by dealers requiring ''house'' margin (or internal margin requirements established and enforced by individual securities dealers). GNMA has established limited margin requirements (24 C.F.R. 390.52), as described below.

2130.0.8 OPTION CONTRACTS

Subsequent to the Board's initial adoption of a policy statement governing futures, forward, and standby contracts, trading of interest rate options began on organized futures and securities exchanges. Proponents of exchange traded options argue that such instruments are attractive to users because they permit the user to obtain down side price risk protection, yet benefit from favorable price movement. In contrast, futures and forward contracts allow the user to lock in a specific price, but the user must forgo future participation if the market should experience an upward price movement. Furthermore, the purchaser of an option pays a one time premium for this protection and is spared the contingent liabilities associated with futures margin calls.

An option is a contract that gives the buyer, or holder, the right, but not the obligation, to buy or sell a specified financial instrument at a fixed price, called the exercise or strike price, before or at a certain future date. Some options, however do not provide for the delivery of the underlying financial instrument and, instead, are cash settled. Moreover, in some cases, the underlying financial instrument is an index. Options that can be exercised before or at the expiration date are referred to as American options; if an option can be exercised only on the expiration date, it is termed a European option.

There are two basic types of options: calls and puts. The *call option* is any option which obligates the writer to deliver to the buyer at a set price (exercise or strike price) within a specified time limit the underlying financial instrument. When the market price of the underlying instrument is above the exercise (strike) price of the call, the call option is ''in-the-money.'' Conversely, when the market price of the underlying financial instrument is below the exercise (strike) price of the call option, the call is ''out-of-the-money.'' When the market price of the underlying instrument is equal to the strike price, the option is ''at-the-money.'' At expiration, the buyer will exercise the option if it is ''in-the-money'' or let it expire unexercised if it is out-of-the-money. An out-of-the-money call option has no value at expiration, since buyers will not purchase the underlying instrument at a price above the current market price. Prior to expiration, the value of an ''in-the-money'' call option is at least equal to the market value of the underlying instrument minus the strike price. The ownership of a call provides significant leverage, but raises the breakeven price relative to ownership of the underlying instrument. Holding the call limits the amount of potential loss and offers unlimited potential for gains.

A *put option* gives the buyer the right, but not the obligation, to *sell* the underlying instrument at a specified price (exercise or strike price), before or at expiration. When the market price of the underlying instrument is below the strike price of the put option, the put is ''in-the-money,'' and a put option is out-of-the-money when the market price of the underlying financial instrument is above the strike price of the put option. Ownership of a put option offers leveraged profitability if the market value of the underlying instrument declines.

Some portfolio managers commonly employ ''covered'' call writing strategies to gain fee income from options written on securities held in the portfolio. If an option position is covered, the seller owns the underlying financial instrument or commodity or has a futures position. For example, an option position would be ''covered'' if a seller owns cash market U.S. Treasury bonds or holds a long position on a Treasury bond futures contract. Writing ''covered calls'' has only limited potential for gain. Writing ''covered calls'' is not a proper strategy for a market that could rise or fall by substantial amounts. It is generally used in a flat market environment.

Referring to the above example, if a seller holds neither the cash market U.S. Treasury Bonds or was not long on the Treasury bond

futures contract, the writer would have an uncovered or ''naked'' position. In such instances, margin would be required (by the exchange, if an exchange traded option—not the case for an OTC option) since the seller would be obligated to satisfy the terms of the option contract if the option buyer exercises the contract. The risk potential for loss in writing ''naked calls'' (calls against which there are no securities held in portfolio) is great since the party required to deliver must purchase the required securities at current market prices. Naked ''covered call'' writing is generally viewed to be speculative since the risks are theoretically unlimited, particularly if it is done solely to generate fee income.

Options are purchased and traded either on organized exchanges or in the over-the-counter (OTC) market. Option contracts follow three-month expiration cycles (example: March/June/September/December). The option contracts expire on the Saturday following the third Friday in the expiration month. Thus, options are considered as ''wasting assets'' because they have a limited life since they expire on a certain day, even though it may be weeks, months, or years from now. The expiration date is the last day the option can be exercised. After that date the option is worthless.

Option premium valuation. The price (value) of an option premium is determined competitively by open outcry auction on the trading floor of the exchange. The premium value is affected by the inflow of buy and sell orders reaching the exchange floor. The buyer of the option pays the premium in cash to the seller of the option which is credited to the seller's account. Several factors affect the value of an option premium, as discussed below. The option premium consists of two parts, ''intrinsic value'' and ''time value.'' *The intrinsic value* is the gross profit that would be realized upon immediate exercise of the option. Stated another way, it is the amount by which the option is in-the-money. It is the higher of: the value of an option if it is exercised today; or zero. For ''in-the-money'' *call* options, it is the difference between the price of the underlying financial instrument, and the exercise (strike) price of the option. For ''in-the-money'' *put* options, it is the difference of the exercise (strike) price of the put option and the price of the underlying financial instrument. The intrinsic value is zero for ''at-the-money'' or ''out-of-the-money'' options. The *time value* derives from the chance that an option will gain intrinsic value in the future or that its intrinsic value will increase before maturity of the contract. Time value is determined by subtracting intrinsic value from the option premium. For example,

Time value = Option premium – Intrinsic values

Time value = 5–10/64 – 4.00

Time value = 1.15384

The option premium is affected by several other factors. One factor involves the comparison of the underlying futures price versus the strike price of the option. An option's price is increased the more that it is in-the-money. A second factor is volatility. Volatile prices of the underlying financial instrument can help stimulate demand for the options, thus increasing the premium. A third factor that affects the premium of an option is the time until expiration. Option premiums are subject to greater price fluctuations because the underlying value of the futures contract changes more with a longer time period. Other factors that affect the option premium are the strike rate(s) and the domestic and foreign (if applicable) interest rates.

An exchange-traded option is often referred to as a ''standardized'' option, reflecting the fact that the terms of the contract are uniform with respect to the underlying instrument, amounts, exercise prices, and expiration dates. OTC options are characterized by terms and conditions which are unique to each transaction. Large financial institutions are often dealers in customized interest rate or foreign exchange options. For example, a banking organization might write a ''cap,'' or series of put option on pounds sterling to protect the dollar value of a sterling denominated receivable due in one year. In this case, an option can be tailored to fit the exact needs of the buyer.

Like futures contracts, contract performance on exchange-traded options is guaranteed by the clearing corporation which interposes itself as a central counterparty to all transactions. It substitutes itself as a seller to all buyers and as a buyer to all sellers. Standardization combined with the clearing corporation's guarantee facilitates trading and helps to insure liquidity in the market. The buyer or seller of an exchange-traded option may always close out an open position by entering into an offsetting transaction, with the same strike price and expiration date, and for the same amount. Indeed, most exchange-traded options are liquidated prior to maturity with an offsetting transaction, rather than by exercising

the option in order to buy or sell the underlying instrument.

Buyers of exchange-traded options are not required to post funds to a margin account because their risk is limited to the premium paid for the option. However, writers (sellers) of options are required to maintain margin accounts because they face substantial amounts of risk. The amount of the margin varies depending upon the volatility in the price of the option. As the option moves closer and closer to being in-the-money, the writer is required to deposit more and more into his margin account, in order to guarantee his performance should the option eventually be exercised.

Options on futures contracts provide the holder with the right to purchase (call) or sell (put) a specified futures contract at the option's strike price. The difference between the strike price on the option and the quote on the futures contract represents the intrinsic value of the option. Options on futures contracts differ from traditional options in one key way: the party who exercises an option on a futures contract receives a long or short futures position (depending on whether he is exercising a call or put option) rather than accepting or making delivery of the underlying security or financial instrument. When the holder of a call option on a futures contract exercises the option and the futures contract is delivered, the option writer must pay the option holder the difference between the futures contract's current value and the strike price of the exercised call. The buyer takes on a long position, and the writer a short position in the futures contract. When a futures put option is exercised, the holder takes on a short futures position, and the writer a long position. The writer of the put pays the holder the difference between the current price of the futures contract and the strike price of the put option. The resultant futures position, like any other futures position, is subject to a daily marked-to-market valuation. In order to liquidate the futures position, both the buyer and the seller must undertake offsetting futures transactions.

2130.0.8.1 Other Option Contracts

2130.0.8.1.1 Stock Index Options

A stock index option is a call or a put that is based on a stock market index such as the S & P 500. As opposed to a regular call or put option on equity securities where there must be a sale and delivery of shares of stock, there is no delivery of the underlying instrument when an index option is exercised. Rather, settlement is in cash.

2130.0.8.1.2 Foreign Currency Options

The right to buy (call) or sell (put) a quantity of a foreign currency for a specified amount of the domestic currency is a foreign currency option. The size of the contract is standard for each currency. The contracts are quoted in cents per unit of foreign currency. As an example, one call option for the British pound is 12,500 pounds.

2130.0.8.2 Caps, Floors, and Collars

Caps, floors, and collars provide risk protection against floating interest rates. The market for these products is an outgrowth of the OTC market in fixed income (bond) options.

An interest rate cap contract pays the buyer cash if the short term interest index rises above the strike rate in the contract in exchange for a fee. In combination with a floating rate obligation, it effectively sets a maximum level on interest rate payments. If market rates are below the cap rate, no payments are made under the cap agreement. Thus, the buyer of a cap is able to place a ceiling on his floating rate borrowing costs without having to forego potential gains from any decline in market rates.

Cap agreements typically range in maturity from 6 months to as long as 12 years, with reset dates or frequencies that are usually monthly, quarterly, or semiannual. The London Interbank Offered Rate (LIBOR) is the most widely used reference rate for caps, floors, and collars. Other indexes used as reference rates are commercial paper rates, the prime interest rate, Treasury bill rates, and certain tax-exempt rates. Cap fees depend upon the cap level, the maturity of the agreement, the volatility of the index used as the reference rate, and market conditions. The higher the cap rate, the lower the premium. The fee is usually paid up front, but can be amortized.

An interest rate floor agreement is used to protect the overall desired rate of return associated with a floating-rate asset. In accordance with the agreement, the seller receives a fee for

the floor agreement from the holder of the underlying asset. When interest rates fall, the holder of the floor contract is protected by the agreement, which specifies the fixed per annum rate (floor rate) that will be retained on those assets, at specified times during the life of the agreement, even though floating interest rates may decline further.

An interest rate collar is a variation of a cap-only agreement. Under this arrangement the seller of the collar, for a fee, agrees to limit the buyer's floating rate of interest within one agreement by a simultaneous sale of a cap and purchase of a floor, or purchase of a cap and sale of a floor. When the reference rate is above the cap rate the seller makes payments to the buyer sufficient to return the buyer's floating rate interest cost to the cap rate. Conversely, the buyer makes payments to the collar provider to bring its rate back to the floor whenever the reference rate falls below the floor rate. In effect, under a collar agreement the buyer is selling a string of call options (the floor) back to the provider of the cap. The premium received from selling the floor reduces the overall cost of the cap to the buyer of the collar. Thus, the premium for a floor/ceiling, or collar, agreement, is lower than for a cap-only agreement with the cap at the same level. This is because the floor sold to the provider of the collar has a certain value, which is passed along to the buyer in the form of a lower premium.

The disadvantage to collars, of course, is that they limit the buyer's ability to profit from declines in market rates below the specified floor. Clearly, one's interest rate expectations play an important role in determining whether or not to use a collar agreement. It should also be noted that collar agreements involve credit risk on both sides of the agreement, similar to the credit risk considerations found in interest rate swap agreements. The buyer of the collar is exposed to the risk that the provider may default on payments due under the cap agreement; and the provider of the collar is exposed to the risk that the buyer may default on payments due under the floor agreement.

2130.0.9 REGULATORY FRAMEWORK

GNMA has adopted limited margin requirements. Specifically, the GNMA margin requirements (12 C.F.R. 390.52) require marking-to-market and the posting of maintenance margin.[5] However, the GNMA margin requirements exclude the majority of GNMA forward contracts and only pertain to contracts involving GNMA issuers with other parties.[6]

The Commodities Futures Trading Commission (''CFTC'') is the agency authorized by Congress to supervise the trading of ''commodities,'' including financial futures. Exchanges which trade commodities must register with the CFTC. In addition, the various futures exchanges must receive CFTC approval before they can begin trading a new futures instrument. Brokers and dealers who execute futures contracts for customers must register as Futures Commission Merchants (''FCM'') with the CFTC. There are also CFTC registration requirements pertaining to firms engaging in commodities activities similar to an investment advisor or mutual fund in the securities markets. Finally, the surveillance activities of the various futures exchange examiners are subject to oversight by the CFTC.

With the exception of reporting requirements concerning persons or entities with large futures positions, the CFTC's jurisdiction generally does not extend to financial institutions. Rather, the federal and state banking agencies, state insurance commissions, and the Office of Thrift Supervision are responsible for supervising regulated entities' future activities, if permitted, under statute or regulation.

2130.0.10 EXAMPLES OF CONTRACT STRATEGIES

For purposes of reporting large positions to the CFTC a market participant defines its future activities as ''speculative'' or as ''hedging.'' Basically, CFTC rules consider a participant to be a hedger if certain facets of such person's business can be hedged in the futures markets; persons who do not have a business need for participating are deemed to be speculators. It is anticipated that bank holding companies characterize their contract activities as ''hedging'', or possibly as arbitrage between various markets.

5. Initial margin requirements necessitate the pledging of something of value prior to initiation of a transaction. Depositing maintenance margin refers to pledging something of value in reaction to market movements; e.g. depositing cash representing the difference between a forward contract price and its current market value.

6. See SR-625 dated July 23, 1980.

Examiners must scrutinize contract positions for purposes of evaluating risk.

The Board policy statement concerning bank holding companies[7] states:

"... the Board believes that any positions that bank holding companies or their nonbank subsidiaries take in financial contracts should reduce risk exposure, that is, not be speculative." It should be noted, however, that a more liberal interpretation of the policy statement has been permitted for dealer subsidiaries. For example, in a government securities dealer subsidiary, it is permissible to use related financial contracts as a substitute trading instrument for cash market instruments. Thus, the use of financial contracts is not limited solely to reducing the risk of dealing activities.

Some examples of contract strategies are provided which reduce risk when viewed in isolation. A definition of a financial hedge is:

"to enter transactions that will protect against loss through a compensatory price movement."

In looking at a hedge transaction in isolation, there should be certain elements present to make a hedge workable:

1. The interest rate futures or forward contract utilized should have a high positive correlation (prices that tend to move in the same direction with similar magnitude) with the cash position being hedged. In other words, the futures or forward position taken should be structured so that an upward price movement in the contract offsets a downward price movement in the cash or risk position being hedged, and vice versa.

2. The type (e.g. T-bill, T-bond, etc.) and size of the contract position[8] taken should have a proportionate relationship to the cash or risk position being hedged, so that futures gains (losses) will approximately offset any losses (gains) on the hedged position.

3. The contract position taken should have a life which is equal to or greater than the end of the period during which the hedge will be outstanding. For example, if interest rate protection was deemed necessary for a six-month time span, it would not ordinarily be wise to enter a contract expiring in three months.

2130.0.10.1 The Mortgage Banking Price Hedge

Assume that a mortgage banking subsidiary agrees in June to originate mortgages at a fixed yield in the following October. Unless the loan originator has a forward commitment to sell the loans to a permanent investor(s), it is exposed to a decline in the principal value of mortgages due to a rise in interest rates between the commitment date and ultimate sale of the loans. An example of a traditional "short hedge" would be the sale of futures contracts in an attempt to reduce the risk of price fluctuation and insure a profitable sale of the loans. However, in following this strategy the mortgage originator also chooses to forfeit its ability to reap a profit if interest rates should fall.

If interest rates increased, the loss on the sale of mortgages or a pool of mortgage-backed securities will probably be largely offset by a gain on the futures transaction; see example below. If interest rates fall, the mortgage originator would gain on the resale of mortgages but lose on the futures market transaction. Hence, in a true hedge, the hedger's earnings are relatively unaffected by a change in market interest rates in either direction.

Generally accepted accounting principles applicable to mortgage activity require that mortgages held for resale be periodically revalued to the lower of cost or market (Financial Accounting Standards Board Statement No. 65, "Accounting for Certain Mortgage Banking Activities"). Unrealized gains and losses on outstanding futures contracts are matched against related mortgages or mortgage commitments when the inventory is revalued to the lower of cost or market; i.e. the lower of cost or market valuation is based upon a net figure including unrealized related futures gains and losses.

2130.0.10.2 Basis

Basis is the difference between the cash (spot) price of a security (or commodity) and its futures price. In other words:

7. The Board's policy statement on engaging in futures, forwards, and option contracts.

8. Futures market participants engage in a practice, sometimes known as "factorweighting" or "overhedging," to determine the appropriate number of futures contracts necessary to have the proper amount of compensatory price movement against a hedged cash or risk position. For example, it would require 10 mortgaged-backed futures contracts (8% coupon, $100,000 face value) to hedge an inventory of $1,000,000 mortgage-backed (8% coupon) securities. Alternatively, 14 mortgage-backed futures contracts would be required to hedge a $1 million inventory of mortgage-backed securities with a 13½% coupon. Overhedging or factor weighting is necessary in hedging securities with higher coupons than those specified in futures contracts (currently 8% on bond futures) because higher coupon securities move more in price for a given change in yield than lower coupons.

Basis = Spot price – Future price

For short-term and intermediate futures contracts, the futures price is the quoted futures price times an appropriate conversion factor. For short-term futures contracts the quoted futures price is 100 less the annualized futures interest rate. The invoice price must be determined using yield-to-price conventions for the financial instrument involved.

Basis may be expressed in terms of prices. Due to the complexities involved in determining the futures price, it is thus better to redefine price basis using actual futures delivery prices rather than quoted futures prices. Thus, the price basis for fixed income securities should be redefined as:

Price Basis = Spot price
– Futures delivery price.

Basis may also be expressed in terms of interest rates. The *rate basis* is defined as:

Rate basis = Spot rate – Futures rate

The spot rate refers to the current rate on the instrument that can be held and delivered on the contract. The futures rate represents the interest rate that corresponds to the futures delivery price of the deliverable instrument.

The rate basis is useful in analyzing hedges of short-term instruments since it nets out all effects resulting from aging. For example, if a one year T-bill has a rate of 9 percent with a price of 85, and a 3-month T-bill has a rate of 9 percent and a price of 94, the price basis would be –9. If a cash security ages, it does not necessarily mean that a change in the rate basis has taken place.

2130.0.10.3 Trading Account Short Hedge

Another example of a short hedge pertains to securities dealers that maintain bond trading accounts. While bonds are held ''long'' (actually owned by the dealer) in trading accounts, dealers are subject to two risks. First, there is the risk that the cost can change regardless of whether the funds are generated through repurchase agreement financing or the dealer's other funding sources. When there is an inverted yield curve (short-term interest rates are higher than long-term rates), trading portfolio bonds in inventory yield less than the cost of funds required to carry them. Second, there is the risk that bond market interest rates will rise, thus forcing the dollar price of bonds down.

2130.0.10.3.1 Example 1: A Perfect Short Hedge[1]

Month	*Cash Market*	*Futures Market*
June	Mortgage department makes commitment to a builder to originate $1 million of mortgages (based on current GNMA 8's cash price) at 98-$^{28}/_{32}$ for $988,750	Sells 10 December mortgage-backed futures at 96-$^{8}/_{32}$ for $962,500 to yield 8.59 percent
October	Mortgage department originates then *sells* $1 million of pooled mortgages to investors at a price of 95-$^{20}/_{32}$, for $956,250	Buys 10 December mortgage-backed futures at 93, for $930,000 to yield 8.95 percent
	Loss: $32,500	Gain: $32,500

1. The effects of margin and brokerage costs on the transaction are not considered. It should be noted that ''perfect hedges'' generally do not occur.

The following example pertains to a bond trading account. Assume that the dealer purchases Treasury bonds on October 4 and simultaneously sells a similar amount of Treasury bond futures contracts. The illustration ignores commission charges and uses futures contracts maturing in March 19x9 because the dealer's

technical analysis discovered an advantage in using the March 19x9, rather than the previous December contract as a hedge. (At that time the previous December contract was the next available contract still trading.)

	Cash Market		*Futures Market*	
10/04/1998	Purchase $5MM T-bonds maturing Aug. 2005, 8% coupon at 87-10/32:		Sell $5MM T-bonds futures contracts expiring Mar. 1999 at 86-21/32:	
	Principal =	$4,365,625	Contract value =	$4,332,813
10/23/1998	Sell $5MM T-bonds at 79.0:		Buy $5MM T-bond futures Mar. 1999 at 79-1/32	
	Principal =	3,950,000	Contract value =	3,951,563
	Cash loss =	($415,625)	Futures gain =	$381,250

Although the hedge did not prevent the dealer's trading account from losing money, it limited the loss to $34,375 instead of $415,625.

It is worth noting that the preceding example also illustrates some of the dangers of using interest rate futures contracts. Although the futures market proved useful to the trading department, a futures contract could have serious consequences for a dealer using an alleged "long hedge to lock-in an attractive yield."

2130.0.10.4 Long Hedge

In certain areas of the country, financial institutions desiring to hold public deposits are required to bid competitively for deposits. The case discussed below pertains to a situation where the competitive bids must be tendered one calendar quarter in advance of receiving the deposit. In this example, the asset side of the balance sheet is not discussed since it is assumed that a banking organization paying the prevailing one-year C.D. interest rate can utilize the funds at a profitable spread.

In this type of situation the bidding institutions are generally vulnerable to falling interest rates; one can safely assume that an institution selected to hold public deposits would not be dismayed to learn subsequently that interest rates had risen and it had locked-in a funding source at or below market rates. However, the funds will not be received for another 3 months. Thus, there is the possibility that interest rates could drop in the interim, leaving a reduced or possibly negative net interest margin when the funds are deployed.

There are a number of approaches available to attempt to ensure that future time deposits can be obtained without paying higher than market interest rates. One method is forecasting the appropriate interest rate to be paid on a given time deposit three months in the future. However, forecasting has become increasingly difficult to do with accuracy in the recent periods of fluctuating interest rates. An alternative approach would be to quote the current C.D. rate (adjusted slightly for competitive factors) with an intent to hedge in the futures market if the banking organization's interest rate bid is accepted. Upon receiving notification that its deposit bid has been accepted, the institution can then purchase an appropriate number of futures contracts to insure a profitable investment spread three months hence when it actually receives the deposit.

The following example on June 1, 19x0; the facts are as follows:

Size of public deposits offered	$10 million
Date of deposit	September 2, 19x0
Term	1 year
Current C.D. rate	8¼%

For purposes of this illustration, assume that a bid was submitted to pay 8¼% for one year on $10 million. The bids were due June 1 and notification was given June 2 of the intention to provide the funds on September 2; and the banking organization decided to purchase futures contracts on June 2.

A Treasury bill futures contract, expiring in 3 months, is selected as the hedging vehicle because it reflects price movement of an instrument with a comparable maturity to one-year

C.D., and there was no C.D. futures contract trading. For purposes of this illustration, it is assumed that the contract offers sufficient liquidity to enable the banking organization to readily offset its open futures position when necessary. Using the bill contract is an example of ''cross hedging'' which is defined as the buying or selling of an interest rate futures contract to protect the value of a cash position of a similar, but not identical, instrument. This type of hedging is a measured risk since the outcome of such a transaction is a function of the price correlation of the instruments being hedged. At any given moment it is conceivable that a negative correlation could exist between two unlike instruments despite the presence of a strong correlation over an extended time period.

Date	*C.D. Rate*	*Transactions*	*T-bill*	*Futures* [1]
June 2, 19x0	8.25%	Purchase 40 Contracts	91.84	8.16%
Sept. 2, 19x0	11.00%	Sell 40 Contracts	90.05	9.95%

1. The size of the trading unit is based upon U.S. T-bills having a face value at maturity of $250,000 (40 × 250M = 10MM). Prices are quoted in terms of an index representing the difference between the actual T-bill yield and 100.00. Every one basis point movement on a contract is equal to $25.00 per contract.

2130.0.10.4.1 Evaluation of the Hedge

Total interest (not compounded) to be paid (8¼%)	$ 825,000
Alternative C.D. interest (not compounded) at current rate (11%)	1,100,000
Difference	275,000
Futures trading loss*	(179,000)
Net difference	$ 96,000

*Computation—Purchase price 91.84
Sale price 90.05
1.79 or 179 basis points
(179 × $25.00 × 40 contracts = $179,000)

In retrospect, it would have been better if the banking organization would not have hedged. By agreeing to an interest rate on June 2, it obtained deposits on September 2 and will pay approximately $275,000 less in interest payments to the municipality than is required on an ordinary C.D.(s) issued on September 2. The $179,000 futures trading loss, of course, reduced the windfall interest income due the banking organization. A net interest income spread of approximately $96,000, instead of a $275,000, demonstrates two principles: 1) cross hedging can cause unexpected results; and 2) it is quite difficult to find perfect hedges in the real world. The hedge was structured so that a cash gain was offset by a futures loss—incorporating the offsetting principles of a hedge transaction. If the general level of interest rates had fallen, a futures gain should have occurred to offset the higher (relative to prevailing market rates) cost of funds obtained on September 2.

2130.0.10.5 Using Options to Create an Interest Rate Floor

Assume that on September 28th it is decided to rollover a $1,000,000 investment in 13-week Treasury bills on November 28, which also happens to be the expiration date for call options on the December Treasury bill futures contract. The banking organization, concerned that interest rates will fall between September 28 and the rollover date, wishes to hedge the rollover of its investment. The portfolio manager can set a minimum yield on the rollover investment by either buying a Treasury bill future call option, or by buying a Treasury bill futures contract. Further assume that the December Treasury bill futures contract can be bought for a price of 93.70 which implies a discount yield of 6.30 percent. Treasury bill futures call options with a strike price of 93.75, implying a discount yield of 6.25 percent, sell for a premium of 20 basis points, or $600 (20 basis points × $25/basis point = $500).

If the banking organization could actually buy a Treasury bill futures contract that expired on exactly November 28, then there would be a perfect hedge since the rate of return on the bills would be explicitly fixed by the futures hedging strategy. However, the closest maturing Treasury bill futures contract expires in December, several weeks after the rollover date for the banking organization's investment. Uncertainty over the actual discount yield of the Treasury bills on the rollover date and the yield produced

by the hedge is known as "basis risk," the risk that the yield on the hedge may differ from the expected yield on the hedged item. For purposes of this example, assume that the yield on the futures contract equals the actual discount yield on the 13-week Treasury bills at the rollover date. Thus, the futures hedge in this example will provide an effective discount yield of 6.30 percent on the rollover of the 13-week Treasury bill investment.

Assume that rates fall after September 28 and that the discount yield on Treasury bill futures contracts declines from 6.30 percent to 6.00 percent at the November 28 expiration date of the December Treasury bill futures options contract. The option to buy the Treasury bill futures will be exercised since the strike price of 93.75 is below the market price of 94.00 for the underlying futures contract, yielding a profit of 25 basis points or $625 (25 basis points × $25/basis point). The profit must be offset by the 20 basis point cost of the option, which reduces the net profit to 5 basis points. The effective hedged discount yield is 6.05 percent (6.00 percent on the 13-week Treasury bills—assuming no basis risk—plus the 5 basis point profit from the hedge). The option hedge produces a yield that is 5 basis points higher than the unhedged yield, but 25 basis points lower than the 6.30 percent yield that would have resulted from hedging with futures.

Although the option hedge resulted in a lower effective yield than the futures hedge, it set an absolute floor on the investment. This is because any decline in the discount yield of the Treasury bills below 6.05 percent would be offset dollar for dollar by the additional profits from the hedge. The real advantage of the option hedge is that, although it establishes a floor that is lower than the rate fixed by the futures hedge, it allows the hedger to participate in any increase in interest rates above the cost of the call premium. For example, if interest rates increased such that the price on the December Treasury bill futures contract on November 28 falls to 93.00, implying a discount yield of 7.00 percent, the option would expire unexercised since the strike price is above the price of the underlying futures contract. Again, assuming that the spot price for the 13-week Treasury bills is equal to the futures price, the effective discount yield is 6.80 percent (7.00 percent minus the 20 basis point call option premium), 50 basis points higher than the yield that would have been provided by the futures hedge.

2130.0.10.6 Hedging a Borrowing with an Interest Rate Cap

In order to limit a borrower's interest rate risk, sophisticated banking institutions may offer cap agreements as part of a loan package to their clients. While such an arrangement provides some comfort that the borrower's ability to repay will not be jeopardized by a sharp increase in interest rates, it obviously transfers that interest rate risk back to the lender. Nevertheless, many banking institutions feel they are better able to manage that risk than are some of their clients. Cap agreements have also been utilized to cap the rate on issued liabilities. For example, an institution might be able to issue medium-term floating rate notes at 3-month LIBOR plus an eighth of a percent. Alternatively, that institution could issue a capped floating rate note at 3-month LIBOR plus three-eights of a percent. By subsequently selling the cap separately back into the market the institution could, achieve sub-LIBOR funding, depending on the proceeds from the sale of the cap.

A cap agreement is typically specified by following terms: notional principal amount; maturity; underlying index, frequency of reset, strike level. As an illustration, a cap agreement might have the following terms:

Notional Principal Amount	$10,000,000
Maturity	2 Years
Underlying Index	3-month LIBOR
Rate Fixing	quarterly
Payment	quarterly, in arrears, on an actual/360-day basis
Cap Level	9%
Up Front Fee	1.11% of par ($111,000)

Under the terms of this agreement, if at any of the quarterly rate fixing dates 3-month LIBOR exceeds the cap level then the seller of the cap would pay the buyer an amount equal to the difference between the two rates. For example, if at a reset date LIBOR was set at 10 percent, the payment would be:

10%(90/360 × $10,000,000)

–

9%(90/360 × $10,000,000)

=

$25,000

Thus, the writer of the cap would pay the buyer $25,000. If 3-month LIBOR for the quarter were set at or below the cap level of 9 percent, no payment would be made.

2130.0.11 ASSET-LIABILITY MANAGEMENT

Financial contracts can be used as a tool in an overall asset-liability management strategy. In order to use financial contracts in this context, a BHC or nonbank subsidiary must first identify where interest-rate exposure lies as indicated by mismatches between asset and liability structures. In those instances where the BHC or nonbank subsidiary has variable-rate assets and variable-rate liabilities with comparable maturities, there is, in theory, no need to hedge with financial contracts since that portion of the asset-liability structure is already hedged. The same holds true for fixed-rate assets and liabilities (yielding a positive interest-rate margin) of comparable maturities. Once a BHC or nonbank subsidiary has identified the undesired mismatches in assets and liabilities, financial contracts can be used to hedge against the identifiable mismatch—for example, long positions in contracts can be used as a hedge against funding interest-sensitive assets with fixed-rate sources of funds, and short positions in contracts can be used as a hedge against funding fixed-rate assets with interest-sensitive liabilities.

BHCs or nonbank subsidiaries that choose to employ financial contracts as a tool in their general asset-liability management program and properly use financial contracts are striving towards worthwhile goals. The discipline of identifying mismatches between assets and liabilities tends to focus the practitioner's attention on the entire balance sheet. Examiners should be aware that marketing efforts on behalf of the futures exchanges have attempted to focus upon just one side of the balance sheet by ''pairing'' a futures contract with an asset or a liability. In considering financial-contract activities, examiners need to remember that financial-contract activities must be evaluated in light of both sides of a balance sheet.

One final point should be made with respect to ''hedging'' based upon pairing a futures contract against a portfolio security. Since this type of ''hedging'' can be done while considering only the asset side of the balance sheet, it is possible that such a strategy could increase interest-rate risk rather than reduce it. For example, assume (unrealistically) that there is a perfect balance between variable-rate assets and liabilities, and the firm is evaluating fixed-rate assets and liabilities. Management determines that there is a perfect balance between fixed-rate assets and liabilities and then isolates the last fixed-rate asset and liability. Make the further assumption that the organization holds a six-month note yielding 12 percent which is financed by funds maturing in six months which costs the organization 10.5 percent. By executing a short futures contract ''paired'' against the six-month note, the organization would move from an overall ''hedged'' position to an ''unhedged'' position. In other words, the futures contract would move the organization from an overall neutral position and expose the organization to interest-rate risk.

It should be evident why it is more productive to consider the ''big picture'' in inspections rather than focusing upon individual or ''paired'' (futures against each position) transactions. The most meaningful approach is to evaluate hedging strategies and open financial contract positions in light of its business needs, operations, and asset-liability mix.

2130.0.12 INSPECTION OBJECTIVES

1. To determine the purpose of financial-contract positions. Any positions that bank holding companies or their nonbank subsidiaries (except certain authorized dealer subsidiaries) take in financial contracts should reduce risk exposure, that is, not be speculative.
2. To determine whether prudent written policies, appropriate limitations, and internal controls and audit programs have been established and whether management information systems are sufficiently adequate to monitor risks associated with contracts involving futures, forwards, and options (including caps, floors, and collars).
3. To determine whether policy objectives concerning the relationship of subsidiary banking organizations and the parent bank hold-

ing company specify that each banking organization in a holding company system must be treated as a separate entity.
4. To determine reporting compliance in accordance with the Board's bank holding company policy statements. See section 2130.0.17 for the appropriate cites.

2130.0.13 INSPECTION PROCEDURES

The term "banking organization" is used generally to refer to a bank holding company, the parent company, or nonbank subsidiary.

1. Determine if the banking organization's financial-contract activities are related to the basic business of banking.

   Consider whether the financial-contract activities are closely related to the basic business of banking; that is, taking deposits, making and funding loans, providing services to customers, and operating at a profit for shareholders without taking undue risks. Taking financial-contract positions solely to profit upon interest-rate forecasts is considered to be an unsafe and unsound practice. Profitability of contract activities is not the criterion for evaluating such activities. It is quite probable that a bona fide hedge strategy could result in a contract loss which would be offset by increased interest earnings or a higher price for an asset sold, for example, a pool of mortgages. Criticize contracts placed solely to profit upon interest-rate movements. Verify that contract activities are conducted in accordance with the Board's policy statement. Where contract positions are of excessive size and could jeopardize the financial health of the entity under examination, the gains or losses realized because of financial-contract activities should be criticized.
2. Ascertain whether policy objectives highlight the circumstances under which financial contracts should be used.

   Determine whether management and operating personnel have received sufficient guidance. Carefully constructed policy objectives should be formulated with the knowledge that although proper utilization of financial contracts limits loss potential, such utilization also limits potentials for gains. Policy objectives should be formulated to limit required resources (margin monies, commissions, and personnel to execute, monitor, and audit contract activities). A well-constructed policy should be designed to preclude various operating areas of a banking organization from taking offsetting financial contract positions. Finally, there should be established benchmarks for determining whether financial contracts are meeting desired objectives.
3. Determine if policy objectives concerning the relationship of subsidiary banking organizations and the parent bank holding company comply with the Board's directives.

   Each banking organization in a holding company system must be treated as a separate entity. The policy statement accommodates centralized holding companies in that the holding companies are free to provide guidance to subsidiary banking organizations and execute contracts as agent on behalf of the banking organization, provided that each banking organization maintains responsibility for financial contract transactions executed on its behalf. Accordingly, a holding company that has centralized management could, and perhaps should, consider the interest-rate exposure of its subsidiary banks on a consolidated basis in determining whether future contracts can usefully be employed to reduce that exposure, but any future contracts that are executed must be recorded on the books and records of a subsidiary bank that will directly benefit from such contracts.

   The question concerning the relationship of a subsidiary bank to its holding company may also lead one to consider the relationship of a subsidiary bank with its correspondent bank or broker. One might also query to what extent may less sophisticated institutions rely upon brokers and/or correspondent banking organizations for advice in this area?

   Less sophisticated institutions can place only limited reliance on others for advice in this area. The bank holding company policy statement[9] emphasizes that responsibility for financial-contract activities rests solely with management. Additional information on securities transactions and the selections of securities dealers can be found in section 2126.1.
4. Ascertain whether policy objectives and/or position limits require prudence on the part of authorized personnel entering into these new activities. If discretion is left to senior

9. The Board's policy statement on engaging in futures, forwards, and option contracts.

managers, determine whether management has issued instructions to ensure that the level of financial-contract activity is prudent relative to the capabilities of persons authorized to execute and monitor contracts.

A new activity such as financial contracts should, as a general rule, be entered slowly. In developing expertise, management should mandate a low level of activity until persons authorized to execute contracts gain sufficient expertise or until new personnel are employed that have sufficient training and experience to engage in financial-contract activities on a larger scale. Senior management must develop the expertise to understand and evaluate techniques and strategies employed to ensure that an experienced professional does not engage in improper or imprudent activities.

5. If a banking organization uses financial contracts as part of its overall asset-liability management strategy, determine whether the organization developed an adequate system for evaluating its interest-rate risk.

   Without a system for identifying and measuring interest-rate risk, it is impossible to engage in hedging activity in an informed and meaningful manner. Failure to identify the mismatches in the organization's asset-liability mix would make it difficult to select the proper number and types of financial contracts—for example, bond or bill financial contracts—to provide an appropriate amount of interest-rate-risk protection. Evaluate whether the organization's interest-rate-risk measurement techniques appear reasonable to determine whether the financial contracts employed were successful in providing the proper amount of futures gains (losses) to cover the hedged risk position.

6. Determine if the recordkeeping system is sufficiently detailed to permit personnel to document and describe in detail how financial-contract positions taken have contributed to the attainment of the banking organization's stated objectives.

   There is no universal, adequate recordkeeping system for this purpose. Examiners must evaluate each individual system relative to the organization's stated objectives and activities. If the recordkeeping system cannot be used to illustrate how financial contracts contributed to the attainment of the banking organization's stated objectives, the recordkeeping system is inadequate. BHCs with inadequate recordkeeping systems should be instructed to make appropriate modifications.

7. Ascertain whether the banking organization's board of directors has established written limitations with respect to financial-contract positions.

   NOTE: The bank holding company policy statement requires that the board of directors establish written policies and position limitations in connection with financial-contract activities. If a committee has been delegated similar responsibilities within the organization, and a committee makes the decision, its recommendation should be ratified by the board of directors.

8. If there is the potential to exceed the above limitations in certain instances, determine whether there are firm, written procedures in place concerning the authorizations necessary to exceed limits.
9. Determine whether the board of directors, a duly authorized committee thereof, or internal auditors review at least monthly financial-contract positions to ascertain conformance with limitations. (See item (b) of the bank holding company policy statement.)
10. Determine if the banking organization maintains general-ledger memorandum accounts or commitment registers to adequately identify and control all financial-contract commitments to make or take delivery of securities or money market instruments.
11. Determine if the banking organization issues or writes option contracts expiring in excess of 150 days which give the other party to the contract the option to deliver securities to it.

    Examiners should review the facts surrounding standby contracts issued by holding companies. Examiners should also review accounting entries connected with bank holding company standby contracts to determine whether standbys were issued to earn fee income ''up front'' and exploit the lack of generally accepted accounting principles.

12. Determine whether financial-contract positions are properly disclosed in notes to the statements of financial condition and income and that the contract positions have been properly reported on FR Y-9C, Schedule HC-F, ''Off-Balance-Sheet Items.''
13. Determine whether the banking organization has implemented a system for monitoring credit-risk exposure associated with

various customers and dealers with whom operating personnel are authorized to transact business.

All financial-contract trading involves market risks. However, forward and OTC options trading, as well as swap activities, also involve credit risk. The key concern is whether the contra party to a transaction will be ready, willing, and able to perform on contract settlement and payment dates. While maintaining control over credit-risk exposure should ensure that a financial organization will not enter excessive (relative to the financial condition of the contra party) forward or standby contracts, monitoring such exposure may not prevent default in all instances.

14. Ascertain whether the banking organization has implemented internal controls and internal audit programs to ensure adherence to written policies and prevent unauthorized trading and other abuses.
15. Determine if the Reserve Bank was notified at the inception of bank holding company futures, forward, and option activities as required by paragraph (f) of the holding company policy statement (*Federal Reserve Regulatory Service* 4–830).
16. Determine if the personnel engaged in financial-contract activities have sufficient knowledge and understanding of the markets to perform those functions.

2130.0.13.1 Evaluating the Risks of Contract Activities

Evaluating the organization's stated objectives and their effects on overall risk is a difficult task involving legitimate cause for concern because of the high degree of leverage involved in contract activities. Although there is an emerging trend towards dealers requiring margin on forward trades, forward contract transactions generally have not required margin deposits, and thus, grant users unlimited leverage. Although the amount of margin required for futures trades is extremely small (for example, $1,500 initial margin to take a $1 million futures position), the rules of the exchanges do require a daily mark to market and a requirement that members of the futures exchanges meet maintenance margin calls on behalf of their customers. Customers, of course, are generally required to promptly reimburse brokers for margin posted on their behalf. Nevertheless, engaging in contract activities requires market participants to assume the market risks of either owning securities or ''shorting'' securities. Issuing (or selling) standby contracts granting the other party to the contract the option to deliver securities is a practice which results in the issuer functioning as an insurer against downside market risk for the other party; in essence, the party receiving the standby fee assumes all of the interest-rate risks of security ownership, but receives none of the benefits.

2130.0.13.2 Reviewing Financial-Contract Positions

The preceding questions were designed to focus the examiner's attention on a bank holding company's stated objectives for engaging in financial contract activities and the manner in which such activities are conducted. It is also vital to review position records with respect to financial contracts or, if necessary, prepare a schedule grouping similar contracts by maturity. Once the various positions have been scheduled it will be possible to evaluate the risk of contract positions relative to the organization under inspection.

2130.0.13.3 Factors to Consider in Evaluating Overall Risk

To determine whether contract positions are reasonable, an examiner must evaluate positions in light of certain key factors: the size of the organization, its capital structure, its business needs, and its capacity to fulfill its obligations. For example, open contracts to purchase $7 million of GNMA securities would be viewed differently in a BHC with $24 million of assets than in a BHC with $1 billion of assets.

There is no guaranty that financial contract prices and cash market prices will move in the same direction at the same velocity; however, contract prices and cash market prices ultimately move towards price convergence in the delivery month. Keeping this fact in mind, the risk evaluating process can be simplified by thinking of the securities underlying the various contracts as a frame of reference. For example, if a BHC holds ''long'' futures contracts on $10 million (par value) of Treasury bonds the examiner should first evaluate the effect (excluding tangible benefits of ownership, e.g., interest income, pledging, etc.) on the organization of holding $10 million of bonds in its portfolio and the resultant appreciation or depreciation if interest rates rise or fall by a given amount. A ''short'' contract of $10 million Treasury bonds would be evaluated as if the banking

organization had executed a short sale for $10 million. In addition, the examiner would have to consider the positive or negative flow of funds received or disbursed as margin to reflect daily contract gains and losses. While commissions on futures contracts are not a major factor in hedging transactions, they also should be considered in this evaluation. Typically, commissions are charged on a ''round turn'' basis—meaning that commissions are charged based upon an assumption that each futures contract will be offset prior to maturity. Since each contract will have to be offset, or securities bought or delivered, it should be determined whether funds will be available to offset contracts or fund delivery. In the case of certain short contracts, a determination must be made as to whether deliverable securities are held or committed for purchase by the banking organization.

2130.0.13.4 Contract Liquidity

In addition to looking at the ''big picture,'' examiners should consider a position in a given contract maturity month relative to the volume of contracts outstanding. For example, in futures trading there is generally a greater open interest in the next contract maturity month and perhaps the following one or two contract maturity months. As one moves away from the near term contracts, there is generally less trading and less ''open interest'' in the more distant contracts. ''Open interest'' or the amount of contracts outstanding is reported in financial newspapers and other publications. Generally, the contracts with the largest open interest and daily trading volume are considered to be the most liquid.

To illustrate the concept discussed above, one should consider the following example. A ''red flag'' should be apparent if a contract review discloses that the organization has taken a sizeable position in a contract expiring in two years. When the examiner checks financial newspapers and other publications, he or she may discover that the BHC's position represents 20 percent of the open interest in that contract. Such a situation would clearly be unsafe and unsound because the relatively huge position coupled with the typically less liquid conditions in distant contracts makes it highly unlikely that the BHC could quickly close out its position if necessary. In addition, one should also question why the distant maturity was chosen since there is no immediate reason to expect a close correlation to the cash market for the underlying security.

With respect to forward contracts, there is an active forward market for GNMA securities specifying delivery of the underlying securities up to four or five months in the future. If a banking organization is executing contracts for more distant maturities, management should be queried as to why it is necessary to trade outside the normal trading cycle.

2130.0.13.5 Relationship to Banking Activities

In evaluating contract activities, examiners should verify that contract strategies are carried to fruition in connection with their relationship to overall objectives. Examiners may find it useful to recommend additional recordkeeping in borderline cases when they encounter situations where financial-contract positions are closed out frequently during the hedge period, but not frequently enough to be considered trading rather than hedging activities. Examiners should suggest proper documentation with regard to financial contracts executed and any additional recordkeeping as needed. Specifically, users could be requested to establish written criteria specifying what circumstances will trigger the closing of such contracts. Then users would be judged by how well they adhered to the criteria as well as whether the plan reduced risk. Hopefully, such recordkeeping would give users the latitude to close out a financial-contract position working against them (as determined by some prearranged benchmark), yet still require sufficient discipline to prevent users from selectively executing financial contracts merely to profit upon interest-rate forecasts.

The preceding discussion should reinforce the fact that the actual utilization of financial contracts is not a clear-cut issue in terms of hedging verses speculation. However, certain key concepts should be kept in mind. First, a decision to hedge with futures or forward contracts involves making a decision that one is content to lock in an effective cost of funds, a sale price of a specific asset, etc. However, the decision to hedge which gives downside protection also means forfeiting the benefits which would result from a favorable market movement. Thus, in evaluating hedge strategies, the organization should be judged as to whether it maintained hedge positions long enough to accomplish its objectives.

Caution should be employed in performing the analysis of financial contracts used to obtain targeted effective interest rates. Examiners should not evaluate transactions solely on a ''paired'' basis, that is, looking at paired cash market and financial-contract positions and forgetting about financial-contract positions relative to the organization's entire balance sheet, nor should examiners fail to review the overall nature of financial-contract activities. For example, individual opening and closing of financial contracts could appear reasonable, but the aggregate activities may be indicative of an organization that is in reality operating a futures trading account solely to profit on interest-rate expectations.

2130.0.13.6 Parties Executing or Taking the Contra Side of a Financial Contract

In addition to monitoring contra-party credit risk, serious efforts should be made to ensure that the banking organization carefully scrutinizes the selection of brokers and dealers. In the case of futures contracts, the Commodity Exchange Act requires that an entity functioning as a futures commission merchant be registered with the CFTC. However, not every FCM may be a member of a commodities exchange. Members of an exchange are given additional supervision by the exchange, while nonmembers are subject to audit by the National Futures Association. In selecting any broker or dealer, an organization should give careful consideration to its reputation, financial viability, and length of time in business. If an organization intends to deal with a newly established FCM or broker-dealer, special efforts should be made to verify the reputation and integrity of its principals. (For additional discussion, see *Federal Reserve Regulatory Service* 3–1562). Although such measures cannot ensure that problems will not subsequently develop with an FCM or broker-dealer, some careful forethought can tend to ensure that relationships will not be developed with persons or firms who had serious problems in the past.

2130.0.14 ACCOUNTING FOR FUTURES CONTRACTS

All futures contracts, except for foreign-currency futures contracts, shall be reported in the Consolidated Financial Statements for Bank Holding Companies in accordance with Financial Accounting Standards Board (FASB) Statement No. 80, ''Accounting for Futures Contracts.'' Foreign-currency futures contracts shall be reported in accordance with the guidance in FASB Statement No. 52, ''Foreign Currency Translation.''

2130.0.14.1 Performance Bonds under Futures Contracts

When the reporting banking organization, as either buyer or seller of futures contracts, has posted a performance bond in the form of a margin account deposited with a broker or exchange, the current balance (as of the report date) of that margin account shall be reported in Other Assets. The balance in the margin account includes the following:

1. the original margin deposit, plus (less)
2. any additions (deductions) as a result of daily fluctuations in the market value of the related contracts (i.e., ''variation margin''), plus
3. any additional deposits made to the account to meet margin calls or otherwise (i.e., ''maintenance margin''), less
4. any withdrawals of excess balances from the account

When the performance bond takes the form of a pledge of assets with a broker rather than a margin account, the pledged assets shall be maintained on the books of the pledging banking organization and no other balance-sheet entry is made for the performance bond. In this case, gains and losses resulting from daily fluctuations in the market value of the related contracts are generally settled with the broker in cash. However, if the pledging banking organization also maintains a working balance with the broker against which recognized daily market gains and losses are posted, the working balance should be reported in Other Assets, and treated in the same manner as a margin account.

2130.0.14.2 Valuation of Open Positions

All open positions in futures contracts must be reviewed at least monthly (or more often, if material) and their current market values determined. The market value of a futures contract is to be based on published price quotations. These futures positions must be revalued at their cur-

rent market values on these valuation dates and any changes in these values reported in accordance with the guidance presented below for hedge or nonhedge contracts, as appropriate.

2130.0.14.3 Criteria for Hedge-Accounting Treatment

A futures contract shall be accounted for as a hedge when the following conditions are met:

1. The banking organization must have determined that the item or group of items to be hedged (that is, the identifiable assets, liabilities, firm commitments, or anticipated transactions) will expose it to price or interest-rate risk.
2. The futures contract must reduce the exposure to risk. This will be demonstrated if, at the inception of the hedge and *throughout the hedge period, high correlation* is expected to exist between the changes in the prices of both the contract and the hedged item or group of items.[10] In other words, the banking organization must monitor the price movements of both the hedge contract and the hedged items to determine that it is probable that changes in the market value of the futures contract will offset the effects of price changes on the hedged items.
3. The futures contract must be designated in writing as a hedge by management at the inception of the hedge.

   In order for a futures contract to qualify as a hedge of an anticipated transaction, the following two additional criteria must be met:

   a. The significant characteristics and expected terms of the anticipated transaction must be identified.
   b. The occurrence of the anticipated transaction must be probable.[11]

2130.0.14.4 Gains and Losses from Monthly Contract Valuations of Futures Contracts That Qualify as Hedges

If the hedge criteria are met, the accounting for the futures contract shall be related to the accounting for the hedged item so that changes in the market value of the futures contract are recognized in income when the effects of related changes in the price or interest rate of the hedged item are recognized. If a banking organization must include unrealized changes in the fair value of a hedged item in income, a change in the market value of the related futures contract shall be recognized in income when the change occurs. Otherwise, a change in the market value of a futures contract that qualifies as a hedge of an existing asset or liability shall be recognized as an adjustment of the carrying amount of the hedged item. A change in the market value of a futures contract that is a hedge of a firm commitment shall be included in the measurement of the transaction that satisfies the commitment. A change in the market value of a futures contract that is a hedge of an anticipated transaction shall be included in the measurement of the subsequent transaction.

Once the carrying amount of an asset or liability has been adjusted for the change in the market value of a futures contract, the adjustment must be recognized in income in the same manner as other components of the carrying amount of that asset or liability (for example, using the interest method). If the item being hedged is an interest-bearing financial instrument otherwise reported at amortized historical cost, then the changes in the market value of the hedge contract that have been reflected as adjustments in the carrying amount of the financial instrument shall be amortized as an adjustment of interest income or expense over the expected remaining life of the hedged item.

If a futures contract that has been accounted for as a hedge of an anticipated transaction is closed before the date of the related transaction, the accumulated change in value of the contract shall be carried forward (assuming high correlation continues to exist) and included in the measurement of the related transaction. When it becomes probable that the quantity of the anticipated transaction will be less than that originally hedged, a pro rata portion of the futures results that would have been included in the measurement of the transaction shall be recognized as a gain or loss.

When futures contracts that are hedges are terminated, the gain or loss on the terminated contracts must be deferred and amortized over the remaining life of the hedged item.

10. Generally, banking practice maintains that correlation in the changes in the market values of the futures contract and the hedged item must be at least 80 percent for the ''high correlation'' criteria in FASB Statement No. 80 to be met.

11. It will be particularly difficult to meet this criteria when an anticipated transaction is not expected to take place in the near future.

2130.0.14.5 Gains and Losses from Monthly Contract Valuations of Futures Contracts That Do Not Qualify as Hedges

For futures contracts that are not accounted for as hedges, the change that has occurred in the market value of open positions since the last call report date shall be reflected in current income, either as ''other noninterest income'' for net gains or ''other noninterest expense'' for net losses.

If high correlation ceases to exist, the banking organization should discontinue accounting for a futures contract as a hedge. When this occurs, the portion of the change in the market value of the contract that has not offset the market value changes of the hedged item, since the inception of the hedge, must be reflected in the Report of Income as ''other noninterest income'' or ''other noninterest expense,'' as appropriate. The contract should thereafter be accounted for as a nonhedge contract with subsequent changes in the contract's market value reflected in current period income.

When futures contracts that are not hedges are terminated, the gain or loss on the terminated contract must be recognized currently in the Report of Income as ''other noninterest income'' or ''other noninterest expense,'' as appropriate.

There is the potential for holding companies and nonbank subsidiaries to follow the referenced accounting applications and break ''hedges'' with unrealized futures gains to recognize income, and maintain hedges with futures losses and adjust the carrying basis of the paired, that is, ''hedged'' asset. Examiners should look for patterns of taking gains and losses with a view to determining whether the opening and closing of contracts is consistent with the organization's risk-reducing strategies.

2130.0.15 PREPARING INSPECTION REPORTS

Unsatisfactory comments pertaining to a bank holding company's financial-contract activities should be noted on the ''Examiner's Comments,'' ''Policies and Supervision,'' and ''Analysis of Financial Factors'' or other appropriate page depending on the severity of the comments within the bank holding company inspection report.

2130.0.16 INTERNAL CONTROLS AND INTERNAL AUDIT

The following is designed to illustrate desirable internal controls and internal audit procedures applicable to the organization's activities in financial contracts. This illustration is not intended to serve as an absolute standard relating to contract activities, but is designed to supplement examiners' knowledge relating to internal controls and internal audits in this context. In evaluating internal controls and audits, the examiner will need to evaluate the scope of futures, forward, and options activities to determine whether internal controls and audit procedures are adequate in relation to the volume and nature of the activities.

2130.0.16.1 Internal Controls

It is a management's responsibility to minimize the risks inherent in financial-contract activities through the establishment of policies and procedures covering organizational structure, segregation of duties, operating and accounting system controls, and comprehensive management reporting. Formal written procedures should be in place in connection with purchases and sales, processing, accounting, clearance and safekeeping activities relating to these transactions. In general, these procedures should be designed to ensure that all financial contracts are properly recorded and that senior management is aware of the exposure and gains or losses resulting from these activities. Some examples of desirable controls follow:

1. Written documentation indicating what types of contracts are eligible for purchase by the organization, which individual persons are eligible to purchase and sell contracts, which individual persons are eligible to sign contracts or confirmations, and the names of firms or institutions with whom employees are authorized to conduct business.
2. Written position limitations for each type of contract established by the banking organization's board of directors and written procedures for authorizing trades, if any, in excess of those limits.
3. A system to monitor the organization's exposure with customers and those broker-dealers and institutions eligible to do business with it. To implement this, management must determine the amount of credit risk permissible with various parties and then institute surveillance procedures to ensure

that such limits are not exceeded without written authorization from senior management.

4. Separation of duties and supervision to ensure that persons executing transactions are not involved in approving the accounting media and/or making accounting entries. Further, persons executing transactions should not have authority to sign incoming or outgoing confirmations or contracts, reconcile records, clear transactions, or control the disbursement of margin payments.
5. A clearly defined flow of order tickets and confirmations. Confirmations generated should, preferably, be prenumbered. In addition to promptly recording all commitments in a daily written commitment ledger, the related documentation should be filed separately for purposes of audit and examination. The flow of confirmations and order tickets should be designed to verify accuracy and enable reconciliations throughout the system, for example, to ensure that a person could not execute unauthorized transactions and bypass part of the accounting system, and to enable the reconcilement of traders' position reports to those positions maintained by an operating unit.
6. Procedures to route incoming confirmations to an operations unit separate from the trading unit. Confirmations received from brokers, dealers, or others should be compared to confirmations (or other control records) prepared by the banking organization to ensure that it will not accept or make delivery of securities, or remit margin payments, pursuant to contracts unless there is proper authorization and documentation.
7. Procedures for promptly resolving fails to receive or fails to deliver securities on the date securities are due to be received or sent pursuant to contracts.
8. Procedures for resolving customer complaints by someone other than the person who executed the contract.
9. Procedures for verifying brokers' reports of margin deposits and contract positions (use an outside pricing source), and reconciling such reports to the records.
10. Procedures for daily review of outstanding contracts and supervision of traders. In addition, there should be periodic reports to management reflecting the margin deposits and contract positions.
11. Selecting and training competent personnel to follow the written policies and guidelines.

2130.0.16.2 Internal Audit

The scope and frequency of the internal audit program should be designed to review the internal control procedures and verify that the internal controls purported to be in effect are being followed. Further, the internal auditor should verify that there are no material inadequacies in the internal control procedures that would permit a person acting individually to perpetrate errors or irregularities involving the records of the organization or assets that would not be detected by the internal control procedures in time to prevent material loss or misstatement of the banking organization's financial statements or serious violation of applicable banking, bank holding company, or securities rules or regulations. Any weaknesses in internal control procedures should be reported to management, along with recommendations for corrective action. If internal auditors do not report to an audit committee, the person to whom they report should not be in a position to misappropriate assets. In addition, auditors should occasionally spot-check contract prices and mark-to-market adjustments.

2130.0.17 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

Subject	*Laws* [1]	*Regulations* [2]	*Interpretations* [3]	*Orders*
Statement of policy concerning bank holding companies engaging in futures, forward, and options contracts on U.S. government and agency securities and money market instruments		225.142	4–830	
Policy Statement on Financial Contracts			3–1535	
Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities			3–1562	

1. 12 U.S.C., unless specifically stated otherwise.
2. 12 C.F.R., unless specifically stated otherwise.
3. *Federal Reserve Regulatory Service* reference.

Financial institutions, including bank holding company subsidiaries, are lending securities with increasing frequency, and, in some instances, a financial institution may lend its own investment or trading-account securities. Financial institutions lend customers' securities held in custody, safekeeping, trust, or pension accounts. Because the securities available for lending often greatly exceed the demand for them, inexperienced lenders may be tempted to ignore commonly recognized safeguards. Bankruptcies of broker-dealers have heightened regulatory sensitivity to the potential for problems in this area.

2140.0.1 SECURITIES-LENDING MARKET

Securities brokers and commercial banks are the primary borrowers of securities. They borrow securities to cover securities fails (securities sold but not available for delivery), short sales, and option and arbitrage positions. Securities lending, which used to involve principally corporate equities and debt obligations, increasingly involves loans of large blocks of U.S. government and federal-agency securities.

Securities lending is conducted through open-ended ''loan'' agreements, which may be terminated on short notice by the lender or borrower. Repurchase agreements are generally used by owners of securities as financing vehicles and, in certain respects, are closely analogous to securities lending. The objective of securities lending, however, is to receive a safe return in addition to the normal interest or dividends. Securities loans in industry practice are generally collateralized by U.S. government or federal-agency securities, cash, or letters of credit.[1] At the outset, each loan is collateralized at a predetermined margin. If the market value of the collateral falls below an acceptable level during the time a loan is outstanding, a margin call is made by the lender institution. If a loan becomes over-collateralized because of appreciation of collateral or market depreciation of a loaned security, the borrower usually has the opportunity to request the return of any excessive margin.

When a securities loan is terminated, the securities are returned to the lender and the collateral to the borrower. Fees received on securities loans are divided between the lender and the customer account that owns the securities. In situations involving cash collateral, part of the interest earned on the temporary investment of cash is returned to the borrower, and the remainder is divided between the lender and the customer account that owns the securities.

2140.0.2 DEFINITIONS OF CAPACITY

Securities lending may be done in various capacities and with differing associated liabilities. It is important that all parties involved understand in what capacity the lender is acting. For the purposes of these guidelines, the relevant capacities are as follows:

1. *Principal.* A lender offering securities from its own account is acting as principal. A lender institution offering customers' securities on an undisclosed basis is also considered to be acting as principal.
2. *Agent.* A lender offering securities on behalf of a customer-owner is acting as an agent. For the lender to be considered a bona fide or ''fully disclosed'' agent, it must disclose the names of the borrowers to the customer-owners (or give notice that names are available upon request), and must disclose the names of the customer-owner to borrowers (or give notice that names are available upon request). In all cases, the agent's compensation for handling the transaction should be disclosed to the customer-owner. Undisclosed agency transactions, that is, ''blind brokerage'' transactions in which participants cannot determine the identity of the contra party, are treated as if the lender was the principal.
3. *Directed agent.* A lender which lends securities at the direction of the customer-owner is acting as a directed agent. The customer directs the lender in all aspects of the transaction, including to whom the securities are loaned, the terms of the transaction (rebate rate and maturity/call provisions on the loan), acceptable collateral, investment of any cash collateral, and collateral delivery.
4. *Fiduciary.* A lender which exercises *discretion* in offering securities on behalf of and for the benefit of customer-owners is acting as a fiduciary. For purposes of these guidelines,

1. Broker-dealers borrowing securities are subject to the restrictions of the Federal Reserve's Regulation T (12 C.F.R. 220.10), which specifies acceptable borrowing purposes.

the underlying relationship may be as agent, trustee, or custodian.

5. *Finder.* A finder brings together a borrower and a lender of securities for a fee. Finders do not take possession of the securities or collateral. Delivery of securities and collateral is direct between the borrower and the lender, and the finder does not become involved. The finder is simply a fully disclosed intermediary.

2140.0.3 GUIDELINES

All bank holding companies or their subsidiaries that participate in securities lending should establish written policies and procedures governing these activities. Other than commercial banks with trust departments, the bank holding company subsidiaries most likely to be engaged in securities lending are non-deposit-taking trust companies and certain discount brokers which provide custody services and make margin loans. At a minimum, policies and procedures should cover each of the topics in these guidelines.

2140.0.3.1 Recordkeeping

Before establishing a securities-lending program, a financial firm or institution must establish an adequate recordkeeping system. At a minimum, the system should produce daily reports showing which securities are available for lending, and which are currently lent, outstanding loans by borrower, outstanding loans by account, new loans, returns of loaned securities, and transactions by account. These records should be updated as often as necessary to ensure that the lender institution fully accounts for all outstanding loans, that adequate collateral is required and maintained, and that policies and concentration limits are being followed.

2140.0.3.2 Administrative Procedures

All securities lent and all securities standing as collateral must be marked to market daily. Procedures must ensure that any necessary calls for additional margin are made on a timely basis.

In addition, written procedures should outline how to choose the customer account that will be the source of lent securities when they are held in more than one account. Possible methods include loan volume analysis, automated queue, a lottery, or some combination of these. Securities loans should be fairly allocated among all accounts participating in a securities-lending program.

Internal controls should include operating procedures designed to segregate duties and timely management reporting systems. Periodic internal audits should assess the accuracy of accounting records, the timeliness of management reports, and the lender's overall compliance with established policies and the firm's procedures.

2140.0.3.3 Credit Analysis and Approval of Borrowers

In spite of strict standards of collateralization, securities-lending activities involve risk of loss. Such risks may arise from malfeasance or failure of the borrowing firm or institution. Therefore, a duly established management or supervisory committee of the lender should formally approve, in advance, transactions with any borrower.

Credit and limit approvals should be based upon a credit analysis of the borrower. A review should be performed before establishing such a relationship and reviews should be conducted at regular intervals thereafter. Credit reviews should include an analysis of the borrower's financial statement, and should consider capitalization, management, earnings, business reputation, and any other factors that appear relevant. Analyses should be performed in an independent department of the lender, by persons who routinely perform credit analyses. Analyses performed solely by the person(s) managing the securities-lending program are not sufficient.

2140.0.3.4 Credit and Concentration Limits

After the initial credit analysis, management of the lender should establish an individual credit limit for the borrower. That limit should be based on the market value of the securities to be borrowed, and should take into account possible temporary (overnight) exposures resulting from a decline in collateral values or from occasional inadvertent delays in transferring collateral. Credit and concentration limits should take into account other extensions of credit by the lender to the same borrower or related interests.

Procedures should be established to ensure that credit and concentration limits are not exceeded without proper authorization from management.

2140.0.3.5 Collateral Management

Securities borrowers generally pledge and maintain collateral at a level equal to at least 100 percent of the value of the securities borrowed.[2] The minimum amount of excess collateral, or ''margin,'' acceptable to the lender should relate to price volatility of the loaned securities and the collateral (if other than cash).[3] Generally, the minimum initial collateral on securities loans is at least 102 percent of the market value of the lent securities plus, for debt securities, any accrued interest.

Collateral must be maintained at the agreed margin. A daily ''mark-to-market'' or valuation procedure must be in place to ensure that calls for additional collateral are made on a timely basis. The valuation procedures should take into account the value of accrued interest on debt securities.

Securities should not be lent unless collateral has been received or will be received simultaneously with the loan. As a minimum step toward perfecting the lender's interest, collateral should be delivered directly to the lender or an independent third-party trustee.

2140.0.3.6 Cash as Collateral

When cash is used as collateral, the lender is responsible for making it income productive. Lenders should establish written guidelines for selecting investments for cash collateral. Generally, a lender will invest cash collateral in repurchase agreements, master notes, a short-term investment fund (STIF), U.S. or Eurodollar certificates of deposit, commercial paper, or some other type of money market instrument. If the lender is acting in any capacity other than as principal, the written agreement authorizing the lending relationship should specify how cash collateral is to be invested.

Using cash collateral to pay for liabilities of the lender or its holding company would be an improper *conflict of interest* unless that strategy was specifically authorized in writing by the owner of the lent securities.

2140.0.3.7 Letters of Credit as Collateral

If a lender plans to accept letters of credit as collateral, it should establish guidelines for their use. Those guidelines should require a credit analysis of the banks issuing the letter of credit before securities are lent against that collateral. Analyses must be periodically updated and reevaluated. The lender should also establish concentration limits for the banks issuing letters of credit, and procedures should ensure they are not exceeded. In establishing concentration limits on letters of credit accepted as collateral, the lender's total outstanding credit exposures from the issuing bank should be considered.

2140.0.3.8 Written Agreements

Securities should be lent only pursuant to a written agreement between the lender and the owner of the securities, specifically authorizing the institution to offer the securities for loan. The agreement should outline the lender's authority to reinvest cash collateral (if any) and responsibilities with regard to custody and valuation of collateral. In addition, the agreement should detail the fee or compensation that will go to the owner of the securities in the form of a fee schedule or other specific provision. Other items which should be covered in the agreement have been discussed earlier in these guidelines.

A lender must also have written agreements with the parties who wish to borrow securities. These agreements should specify the duties and responsibilities of each party. A written agreement may detail acceptable types of collateral (including letters of credit); standards for collateral custody and control, collateral valuation and initial margin, accrued interest, marking to market, and margin calls; methods for transmitting coupon or dividend payments received if a security is on loan on a payment date; conditions which will trigger the termination of a loan (including events of default); and acceptable

2. Employee benefit plans subject to the Employee Retirement Income Security Act are specifically required to collateralize securities loans at a minimum of 100 percent of the market value of loaned securities (see section 2140.0.3.10 below).

3. The level of margin should be dictated by level of risk being underwritten by the securities lender. Factors to be considered in determining whether to require margin above the recommended minimum include the type of collateral, the maturity of collateral and lent securities, the term of the securities loan, and the costs which may be incurred when liquidating collateral and replacing loaned securities.

methods of delivery for loaned securities and collateral.

2140.0.3.9 Use of Finders

Some lenders may use a finder to place securities, and some financial institutions may act as finders. A finder brings together a borrower and a lender for a fee. Finders should not take possession of securities or collateral. The delivery of securities loaned and collateral should be direct between the borrower and the lender. A finder should not be involved in the delivery process.

The finder should act only as a fully disclosed intermediary. The lender must always know the name and financial condition of the borrower of any securities it lends. If the lender does not have that information, it and its customers are exposed to unnecessary risks.

Written policies should be in place concerning the use of finders in a securities-lending program. These policies should cover circumstances in which a finder will be used, which party pays the fee (borrower or lender), and which finders the lender institution will use.

2140.0.3.10 Employee Benefit Plans

The Department of Labor has issued two class exemptions which deal with securities-lending programs for employee benefit plans covered by the Employee Retirement Income Security Act (ERISA): Prohibited Transaction Exemption 81-6 (46 FR 7527 (January 23, 1981) and correction (46 FR 10570 (February 3, 1981))), and Prohibited Transaction Exemption 82-63 (47 FR 14804 (April 6, 1982)). The exemptions authorize transactions which might otherwise constitute unintended ''prohibited transactions'' under ERISA. Any firm engaged in the lending of securities for an employee benefit plan subject to ERISA should take all steps necessary to design and maintain its program to conform with these exemptions.

Prohibited Transaction Exemption 81-6 permits the lending of securities owned by employee benefit plans to persons who could be ''parties in interest'' with respect to such plans, provided certain conditions specified in the exemption are met. Under those conditions, neither the borrower nor an affiliate of the borrower can have discretionary control over the investment of plan assets, or offer investment advice concerning the assets, and the loan must be made pursuant to a written agreement. The exemption also establishes a minimum acceptable level for collateral based on the market value of the loaned securities.

Prohibited Transaction Exemption 82-63 permits compensation of a fiduciary for services rendered in connection with loans of plan assets that are securities. The exemption details certain conditions which must be met.

2140.0.3.11 Indemnification

Certain lenders offer participating accounts indemnification against losses in connection with securities-lending programs. Such indemnifications may cover a variety of occurences including all financial loss, losses from a borrower default, or losses from collateral default. Lenders that offer such indemnification should obtain a legal opinion from counsel concerning the legality of their specific form of indemnification under federal and/or state law.

A lender which offers an indemnity to its customers may, in light of other related factors, be assuming the benefits and, more importantly, the liabilities of a principal. Therefore, lenders offering indemnification should also obtain written opinions from their accountants concerning the proper financial statement disclosure of their actual or contingent liabilities.

2140.0.4 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

Subject	*Laws* [1]	*Regulations* [2]	*Interpretations* [3]	*Orders*
Securities Lending policy statement of the Federal Financial Institutions Examination Council, adopted by the Federal Reserve Board on May 6, 1985			3–1579.5	

1. 12 U.S.C., unless specifically stated otherwise.
2. 12 C.F.R., unless specifically stated otherwise.
3. Federal Reserve Regulatory Service reference.

Depository institutions and others involved with the purchase of United States Government and Agency obligations under agreements to resell (reverse repurchase agreements),[2] have sometimes incurred significant losses. The most important factors causing these heavy losses have been inadequate credit risk management and the failure to exercise effective control over securities collateralizing the transactions.[3]

The following minimum guidelines address the need for managing credit risk exposure to counterparties under securities repurchase agreements and for controlling the securities in those transactions, and should be followed when entering into repurchase agreements with securities dealers and others.

Depository institutions and nonbank subsidiaries that actively engage in repurchase agreements are encouraged to have more comprehensive policies and controls to suit their particular circumstances. The examining staffs of the Federal Reserve should review written policies and procedures of dealers to determine their adequacy in light of these minimum guidelines and the scope of each subsidiary's operations.

2150.0.1 CREDIT POLICY GUIDELINES

The apparent safety of short-term repurchase agreements which are collateralized by highly liquid, U.S. Government and Federal agency obligations has contributed to an attitude of complacency. Some portfolio managers have underestimated the credit risk associated with the performance of the counterparty to the transactions, and have not taken adequate steps to assure control of the securities covered by the agreement.

All firms that engage in securities repurchase agreement transactions should establish written credit policies and procedures governing these activities. At a minimum, those policies and procedures should cover the following:

Written policies should establish ''know your counterparty'' principles. Engaging in repurchase agreement transactions in volume and in large dollar amounts frequently requires the services of a counterparty who is a dealer in the underlying securities. Some firms which deal in the markets for U.S. Government and Federal agency securities are subsidiaries of, or related to, financially stronger and better known firms. However, these stronger firms may be independent of their U.S. Government securities subsidiaries and affiliates and may not be legally obligated to stand behind the transactions of related companies. Without an express guarantee, the stronger firm's financial position cannot be relied upon in assessing the creditworthiness of a counterparty.

It is important to know the legal entity that is the actual counterparty to each repurchase agreement transaction. Know about the actual counterparty's character, integrity of management, activities, and the financial markets in which it deals. Be particularly careful in conducting repurchase agreements with any firm that offers terms that are significantly more favorable than those currently prevailing in the market.

In certain situations firms may use, or serve as, brokers or finders in order to locate repurchase agreement counterparties or particular securities. When using or acting as this type of agent the names of each counterparty should be fully disclosed. Do not enter into undisclosed agency or ''blind brokerage'' repurchase transactions in which the counterparty's name is not disclosed.

2150.0.1.1 Dealings with Unregulated Securities Dealers

A dealer in U.S. Government and Federal agency obligations is not necessarily a Federally insured bank or thrift, or a broker/dealer registered with the Securities and Exchange Commission. Therefore, the dealer firm may not

1. A repurchase agreement is a transaction involving the *sale* of assets by one party to another, subject to an agreement by the seller to repurchase the assets at a specified date or in specified circumstances.

2. In order to avoid confusion among market participants who sometimes use the same term to describe different sides of the same transaction, the term ''repurchase agreement'' will be used in the balance of this statement to refer to both repurchase and reverse repurchase agreements. A repurchase agreement is one in which a party that owns securities acquires funds by transferring the securities to another party under an agreement to repurchase the securities at an agreed upon future date. A reverse repurchase (resale) agreement is one in which a party provides funds by acquiring securities pursuant to an agreement to resell them at an agreed upon future date.

3. Throughout this document repurchase agreements are generally discussed in terms of secured credit transactions. This usage should not be deemed to be based upon a legal determination.

be subject to any Federal regulatory oversight.

A firm doing business with an unregulated securities dealer should be certain that the dealer voluntarily complies with the Federal Reserve Bank of New York's minimum capital guideline, which currently calls for liquid capital to exceed measured risk by 20 percent (that is, the ratio of a dealer's liquid capital to risk of 1.2:1). This ratio can be calculated by a dealer using either the Securities and Exchange Commission's Net Capital Rule for Brokers and Dealers (Rule 15c31) or the Federal Reserve Bank of New York's Capital Adequacy Guidelines for United States Government Securities Dealers. To ensure that an unregulated dealer complies with either of those capital standards, it should certify its compliance with the capital standard and provide the following three forms of certification:

1. A letter of certification from the dealer that the dealer will adhere on a continuous basis to the capital adequacy standard;

2. Audited financial statements which demonstrate that as of the audit date the dealer was in compliance with the standard and the amount of liquid capital; and

3. A copy of a letter from the firm's certified public accountant stating that it found no material weaknesses in the dealer's internal systems and controls incident to adherence to the standard.[4]

Periodic evaluations of counterparty creditworthiness should be conducted by individuals who routinely make credit decisions and who are not involved in the execution of repurchase agreement transactions.

Prior to engaging in initial transactions with a new counterparty, obtain audited financial statements and regulatory filings (if any) from counterparties, and insist that similar information be provided on a periodic and timely basis in the future. Recent failures of government securities dealers have typically been foreshadowed by delays in producing these statements. Many firms are registered with the Securities and Exchange Commission as broker/dealers and have to file financial statements and should be willing to provide a copy of these filings.

The counterparty credit analysis should consider the financial statements of the entity that is to be the counterparty as well as those of any related companies that could have an impact on the financial condition of the counterparty. When transacting business with a subsidiary, consolidated financial statements of a parent are not adequate. Repurchase agreements should not be entered into with any counterparty that is unwilling to provide complete and timely disclosure of its financial condition. As part of this analysis, the firm should make inquiry about the counterparty's general reputation and whether there have been any formal enforcement actions against the counterparty or its affiliates by State or Federal securities regulators.

Maximum position and temporary exposure limits for each approved counterparty should be established based upon credit analysis performed. Periodic reviews and updates of those limits are necessary.

Individual repurchase agreement counterparty limits should consider overall exposure to the same or related counterparty. Repurchase agreement counterparty limitations should include the overall permissible dollar positions in repurchase agreements, maximum repurchase agreement maturities and limits on temporary exposure that may result from decreases in collateral values or delays in receiving collateral.

2150.0.2 GUIDELINES FOR CONTROLLING REPURCHASE AGREEMENT COLLATERAL

Repurchase agreements can be a useful asset and liability management tool, but repurchase agreements can expose a firm to serious risks if they are not managed appropriately. It is possible to reduce repurchase agreement risk by negotiating written agreements with all repurchase agreement counterparties and custodian banks. Compliance with the terms of these written agreements should be monitored on a daily basis. If prudent management control requirements of repurchase agreements are too burdensome, other asset/liability management tools should be used.

The marketplace perceives repurchase agreement transactions as similar to lending transactions collateralized by highly liquid Government securities. However, experience has shown that the collateral securities will probably *not* serve as protection if the counterparty becomes insolvent or fails, and the purchasing firm does not have control over the securities. Ultimate responsibility for establishing adequate control procedures rests with management of the firm. Management should obtain a written legal opin-

4. This letter should be similar to that which must be given to the SEC by registered broker/dealers.

ion as to the adequacy of the procedures utilized to establish and protect the firm's interest in the underlying collateral.

A written agreement specific to a repurchase agreement transaction or master agreement governing all repurchase agreement transactions should be entered into with each counterparty. The written agreement should specify all the terms of the transaction and the duties of both the buyer and seller. Senior managers should consult legal counsel regarding the content of the repurchase and custodial agreements. The repurchase and custodial agreements should specify, but should not be limited to, the following:

- Acceptable types and maturities of collateral securities;
- Initial acceptable margin for collateral securities of various types and maturities
- Margin maintenance, call, default and sellout provisions;
- Rights to interest and principal payments;
- Rights to substitute collateral; and
- The persons authorized to transact business on behalf of the firm and its counterparty.

2150.0.2.1 Confirmations

Some repurchase agreement confirmations may contain terms that attempt to change the firm's rights in the transaction. The firm should obtain and compare written confirmations for each repurchase agreement transaction to be certain that the information on the confirmation is consistent with the terms of the agreement. The confirmation should identify specific collateral securities.

2150.0.2.2 Control of Securities

As a general rule, a firm should obtain possession or control of the underlying securities and take necessary steps to protect its interest in the securities. The legal steps necessary to protect its interest may vary with applicable facts and law and accordingly should be undertaken with the advice of counsel. Additional prudential management controls may include:

- delivery of either physical securities to, or in the case of book entry securities, making appropriate entries in the books of a third party custodian designated under a written custodial agreement which explicitly recognizes the firm's interest in the securities as superior to that of any other person; or
- appropriate entries on the books of a third party custodian acting pursuant to a tripartite agreement with the firm and the counterparty, ensuring adequate segregation and identification of either physical or book-entry securities.

Where control of the underlying securities is not established, the firm may be regarded only as an unsecured general creditor of the insolvent counterparty. In such instance, *substantial losses are likely to be incurred.* Accordingly, a firm should not enter into a repurchase agreement without obtaining control of the securities unless all of the following minimum procedures are observed: (1) it is completely satisfied as to the creditworthiness of the counterparty; (2) the transaction is within credit limitations that have been pre-approved by the board of directors, or a committee of the board, for unsecured transactions with the counterparty; (3) periodic credit evaluations of the counterparty are conducted; and (4) the firm has ascertained that collateral segregation procedures of the counterparty are adequate. Unless prudential internal procedures of these types are instituted and observed, the firm may be cited for engaging in unsafe or unsound practices.

All receipts and deliveries of either physical or book-entry securities should be made according to written procedures, and third party deliveries should be confirmed in writing directly by the custodian. It is not acceptable to receive confirmation from the counterparty that the securities are segregated in a firm's name with a custodian; the firm should, however, obtain a copy of the advice of the counterparty to the custodian requesting transfer of the securities to the firm. Where securities are to be delivered, payment for securities should not be made until the securities are actually delivered to the firm or its agent. The custodial contract should provide that the custodian takes delivery of the securities subject to the exclusive direction of the firm.

Substitution of securities should not be allowed without the prior consent of the firm. The firm should give its consent before the delivery of the substitute securities to it or a third party custodian. Any substitution of securities should take into consideration the following discussion of ''margin requirements.''

2150.0.2.3 Margin Requirements

The amount paid under the repurchase agreement should be less than the market value of the securities, including the amount of any accrued interest, with the difference representing a predetermined margin. Factors to be considered in establishing an appropriate margin include the size and maturity of the repurchase transaction, the type and maturity of the underlying securities, and the creditworthiness of the counterparty. Margin requirements on U.S. Government and Federal agency obligations underlying repurchase agreements should allow for the anticipated price volatility of the security until the maturity of the repurchase agreement. Less marketable securities may require additional margin to compensate for less liquid market conditions. Written repurchase agreement policies and procedures should require daily mark-to-market of repurchase agreement securities to the bid side of the market. Repurchase agreements should provide for additional securities or cash to be placed with the firm or its custodian bank to maintain the margin within the predetermined level.

Margin calculations should also consider accrued interest on underlying securities and the anticipated amount of accrued interest over the term of the repurchase agreement, the date of interest payment and which party is entitled to receive the payment. In the case of pass-through securities, anticipated principal reductions should also be considered when determining margin adequacy.

Prudent management procedures should be followed in the administration of any repurchase agreement. Longer term repurchase agreements require management's daily attention to the effects of securities substitutions, margin maintenance requirements (including consideration of any coupon interest or principal payments) and possible changes in the financial condition of the counterparty. Engaging in open repurchase agreement transactions without maturity dates may be regarded as an unsafe and unsound practice unless the firm has retained rights to terminate the transaction quickly to protect itself against changed circumstances. Similarly, automatic renewal of short-term repurchase agreement transactions without reviewing collateral values and adjusting collateral margin may be regarded as an unsafe and unsound practice. If additional margin is not deposited when required, the firm's rights to sell securities or otherwise liquidate the repurchase agreement should be exercised without hesitation.

2150.0.2.4 Overcollateralization

A firm should use current market values, including the amount of any accrued interest, to determine the price of securities that are sold under repurchase agreements. Counterparties should not be provided with excessive margin. Thus, the written repurchase agreement contract should provide that the counterparty must make additional payment or return securities if the margin exceeds agreed upon levels. When acquiring funds under repurchase agreements it is prudent business practice to keep at a reasonable margin the difference between the market value of the securities delivered to the counterparty and the amount borrowed. The excess market value of securities sold may be viewed as an unsecured loan to the counterparty subject to the unsecured lending limitations for the firm and should be treated accordingly for credit policy and control purposes.

2150.0.3 OPERATIONS

A firm's operational functions should be designed to regulate the custody and movement of securities and to adequately account for trading transactions. Because of the dollar volume and speed of trading activities, operational inefficiencies can quickly result in major problems.

In some cases, a firm may not receive or deliver a security by settlement date. When a firm fails to receive a security by the settlement date, a liability exists until the transaction is consummated or cancelled. When the security is not delivered to the contra-party by settlement date, a receivable exists until that "fail" is resolved. "Fails" to deliver for an extended time, or a substantial number of cancellations, are sometimes characteristic of poor operational control or questionable trading activities.

Fails should be controlled by prompt reporting and follow-up procedures. The use of multicopy confirmation forms enables operational personnel to retain and file a copy by settlement date and should allow for prompt fail reporting and resolution.

2150.0.4 LAWS, REGULATIONS, INTERPRETATIONS, AND ORDERS

Subject	*Laws* [1]	*Regulations* [2]	*Interpretations* [3]	*Orders*
Federal Financial Institutions Examination Council policy statement, adopted by the Federal Reserve Board on November 12, 1985, on repurchase agreements			3–1579	

1. 12 U.S.C., unless specifically stated otherwise.
2. 12 C.F.R., unless specifically stated otherwise.
3. Federal Reserve Regulatory Service reference.

Risk management is an important responsibility of any bank holding company. The objective of this responsibility is to determine and limit the extent of the holding company organization's vulnerability to uncontrollable variables. While all companies perform risk evaluation in some form and exercise some degree of control over its magnitude, the precise processes used differ considerably across organizations in terms of formality, extensiveness, and effectiveness. It should be recognized that many organizations have only an implicit risk evaluation process, and that it may be appropriate to recommend that this process be formalized. Ultimately, the board of directors of the parent company should be held accountable for the consolidated risk evaluation and control.

Risk management at any level involves two basic elements: evaluation and control. Risk evaluation involves three steps: determination of exposures; specification of uncontrollable variables that have an impact on each exposure; and quantification of the expected effect of each variable on exposure. After the extent of existing or potential risk is determined, decisions to limit or control risk are made. This procedure is ever present, since most transactions create exposure, and every exposure has some element of risk. The following two sections discuss the risk evaluation and the risk control processes in very broad terms in an attempt to provide a framework that can be applied to most organizations.

2160.0.1 RISK EVALUATION

The risk identification process begins with a determination of exposures that an institution has to the environment.

Exposure conceptually occurs in every transaction undertaken by a banking organization. Because of the magnitude of the list of potential exposures, institutions generally limit their efforts to extremely large exposures, to areas where losses appear likely, and to activities where the market is changing and new exposures are created. The size of an exposure generally is dependent on the size of a transaction. This is true both for transactions recorded on accounting balance sheets and for those which occur off balance sheet. Exposure is not necessarily determined by the likelihood of loss. For example, many holding company organizations have a large "exposure" in Treasury bills, but do not consider these transactions to be risky.

The list of exposures that banks commonly identify has increased dramatically in the past decade. Historically, the primary focus has been on the exposure of the loan portfolio centering on the financial security of each individual loan; recently industry and geographical exposure of loans has increased in importance. The exposure of fixed assets, such as buildings, to fires, floods and other problems also has been recognized. In more recent years, exposure of mismatched maturities of assets and liabilities to interest rate movements has increased in importance as interest-rate movements have sharply fluctuated. While this exposure had always existed, it had not been recognized as particularly dangerous until recently. Another example of an exposure that historically was considered safe is repurchase agreements backed by government securities. When Drysdale Government Securities, Inc. failed, several risks were brought to light—whether the instrument is a loan (that would be tied up in case of bankruptcy) or a sale and potential liability when serving as an agent of a government securities firm that fails. A particularly difficult area to evaluate is exposure to legal action. For example, a suit against a bank over lending terms and representations is difficult to anticipate and the exposure could be significant.

Numerous exposures exist that many holding company organizations may not recognize. For example, the Federal Reserve System encourages evaluation of wire transfer exposure. This exposure is very large and theoretically a breakdown on the framework or compromise of internal systems could result in major failures. Exposure from foreign exchange contracts also can be large, and may not always be recognized. Fraud and exposure of management to kidnapping continue to increase in importance. And finally, some major holding company organizations have found that dependence on short-term market funds creates a risky exposure. When access to a funding market may be suddenly withdrawn, the exposure of the entire funding process is an issue.

The second step of the risk identification process is specification of the variables that could affect an exposure and determination of what the impact would be.

This process is difficult, since any number of variables may influence an exposure. Furthermore, as the environment changes new variables

may appear relevant and the effects of variables may change. For example, the recent problems of public sector lending to foreign countries with loans denominated in dollars having floating interest rates during inflationary periods may not have been fully evaluated at the time of the lending process.

Determining influential variables is particularly difficult with new products. A historical examination cannot be made of these new products and questions may go unanswered regarding the stability of the new markets. For example, problems have occurred in hedging operations as underlying instruments did not move as expected, thus negating the hedging contract. Consequently, the hedge created an exposure rather than reducing an exposure.

The final step of the risk identification process is risk quantification.

Conceptually, this involves calculation of an expected loss of value related to variance of a particular environmental factor. This has two parts: (1) estimation of the probability that a given variance will occur; and (2) determination of the cost impact of each potential variance. Probabilities are often drawn up in general terms. In some cases historical records facilitate estimation of probabilities. Measurement of credit risk in an organization that specializes by industry or geography may be an example of this. In the most recent recession, however, many past records have proven not to be accurate predictors. In other situations, the holding company organization may evaluate the effect of a change but be unwilling to estimate probabilities of the change occurring. An example of this is managing asset and liability maturities. The effect of a change in interest rates on profits may be determined; but, in many cases, institutions will not derive probabilities on the direction and/or magnitude of interest rate movements.

The difficulty of quantifying costs and probabilities is exacerbated by emergence of new products and by environmental changes. With a new product, it is particularly difficult to determine the cost of a variance. For example, attention to interest rate risk has induced organizations to resort to hedging to reduce exposure. Innovative instruments are difficult to hedge, however, since the issuer may inaccurately gauge price movements. In this case, the exposure results not from price movements, but from inability to predict the relationship between market and price fluctuations. Furthermore, as the environment changes, the effect of a variable on an exposure changes as does the cost and probability of the occurrence. For example, in the 1970's the impact of inflation on the banking system would have been very different without the concurrent economic downturn and the technological advances.

2160.0.2 RISK CONTROL

After management has identified and evaluated risk, they may decide the risk or cost of an action is sufficiently low (and management is confident all possible variables have been identified) that the holding company can take on the risk as it is; if not there are a number of options that can be used to control the risk. Attempts to control risk can be accomplished through a combination of three general techniques: purchase of insurance, limitation of exposure size, and reduction of the expected cost associated with a variance. The use of insurance to decrease the effect of a loss on the corporation is common for exposure to fire, theft, kidnapping, and internal fraud. Various types of loans are underwritten by third parties. The innovative use of insurance may prove to have various applications to risk control in the banking industry. As with other contracts, the financial strength and reputation of the counterparty (the insurer) are important, and the organization's method of selecting and monitoring underwriters should be evaluated.

Management generally limits the level of exposure in relationship to the size of assets, capital or earnings. In most situations, relating the level of exposure to capital would appear appropriate. Reduction of exposure will automatically reduce risk, assuming other variables remain constant. Constraints should be determined by line management at a seniority level commensurate with the degree of perceived risk. Depending on the degree of risk, there may be a need for the board of directors to approve the constraints.

The third method of reducing the potential loss to the corporation involves decreasing the probability of a variance occurring or decreasing the probable effect when a variance occurs. This is exemplified by the exposure to fire. Installation of fire alarms and other precautions could reduce the expected loss substantially. Similarly, hedging with financial futures is a method used to reduce the effect of interest rate movement on the profits of the holding company organization when the maturities of assets and liabilities are not equal.

The final option management has, after risk

has been evaluated, is simply not to participate in the activity if the risk is determined to be too high for the expected return.

The inspection procedures should include a broad-based evaluation of parent level risk management. Management's effectiveness in identifying risk, its willingness to accept risk, and its ability to control risk should be regularly evaluated. In an environment of rapid change and emerging financial instruments, there needs to be sufficient expertise to recognize the existence of "new" sources of risk concentration to evaluate the company's command of those sources.

2160.0.3 INSPECTION OBJECTIVES

1. To review the risk evaluation and control process.
2. To determine if management's system of identifying risks is effective, and if the parent company is adequately informed of risks throughout the organization.
3. To determine management's recognition of new risks that may arise from the changing environment.
4. To determine the reasonableness of the holding company's exposure-risk figures.
5. To assess the effect on the holding company's financial condition if the risk figures are realized.
6. To determine what actions are necessary to rebalance transactions of a holding company organization to a prudent level.

2160.0.4 INSPECTION PROCEDURES

1. Review the financial condition and the operations of the holding company organization to detect substantive exposure-risk situations.
2. Review management's policies, procedures, and practices in recognizing exposure-risk factors.
3. Determine awareness that all management levels need to be cognizant of exposures related to transactions of their respective operations.
4. Review the holding company's exposure-risk figures, or constraints placed on types of transactions.
5. Discuss with management the significance of exposure-risks facing the holding company and whether or not those risks are set at seemingly prudent levels.
6. Recommend that the organization address any areas where the holding company is perceived to have assumed an imprudent level of risk.

2170.0.1 INTRODUCTION

On April 10, 1985, the Board approved a supervisory policy, via the Federal Financial Institutions Examination Council, for supervising banking organizations that participate in the purchase and sale of loans guaranteed by the U.S. government. The policy reminds those organizations that premiums received in lieu of servicing fees, with respect to the selling and servicing entity, are to be amortized over the life of the loan; and that, with respect to the purchaser, the premiums paid over the face value of the note are not guaranteed and are not paid by the guaranteeing federal agency when the loans are prepaid or in default. The statement thus cautions against paying inappropriate or excessive premiums.

2170.0.2 RECOMMENDATIONS FOR ORIGINATING AND SELLING INSTITUTIONS

Examiners should review the extent and nature of activities in connection with the sale of government guaranteed loans. Lax or improper management of the selling institution's servicing responsibilities should be criticized. Out-of-trade area lending for the purpose of resale of any portion of U.S. government guaranteed loans should be carefully reviewed to ensure that the practice is conducted in a safe and sound manner.

All income, including servicing fees and premiums charged in lieu of servicing fees, associated with the sale of U.S. government guaranteed loans, should be recognized only as earned and amortized to appropriate income accounts over the life of the loan.

2170.0.3 RECOMMENDATIONS FOR PURCHASING INSTITUTIONS

Purchasers of U.S. government guaranteed loans should be aware that the purchase premiums are not guaranteed and are not paid by the guaranteeing Federal agency when the loans are prepaid. Because payment of premiums which do not reasonably relate to the yield on the loan can distort published financial reports by overstating the value of a banking organization's assets, it will generally be viewed as an unsafe and unsound practice to pay purchase premiums which result in a significant overstatement in the value of bank assets.

Many government guaranteed loans currently being originated and sold are variable rate. These variable rate loans normally should not trade at anything more than a modest premium or discount from par. Examiners will carefully review any loans being sold or purchased at significant premiums and will criticize any involvement with excessive premiums as an unsafe and unsound business practice. Excessive purchase premiums will be classified loss. The loans will be required to be revalued to the market value at the time of the acquisition and the excessive premiums will be charged against current earnings.

In addition, any unamortized loan premium on a government guaranteed loan must be immediately charged against income if the loan is prepaid, regardless of whether payment is received from the borrower or the guaranteeing agency.

2175.0.1 INTRODUCTION

Banking organizations have become increasingly involved in marketing third-party uninsured annuities to their retail customers either directly or through third-party companies. As annuity sales have grown, so have concerns that some methods used to sell these instruments could give purchasers the impression that the annuities are federally insured deposits or that they are obligations of a bank. In the event of default by an annuities underwriter, this impression could cause a loss of public confidence in a depository institution, leading to unexpected withdrawals and liquidity pressures. Moreover, a bank or bank holding company that advertises or markets annuities in a way viewed as misleading could potentially be held liable for losses sustained by annuity holders.

This manual section provides guidelines to examiners for reviewing the sale of uninsured annuities by bank holding companies and banks that have legal authority to act as agent in the sale of annuities. State member banks and bank holding companies should not market, sell, or issue uninsured annuities or allow third parties to market, sell, or issue uninsured annuities on depository-institution premises in a manner that conveys the impression or suggestion that such instruments are either (1) federally insured deposits or (2) obligations of or guaranteed by an insured depository institution. Consequently, state member banks should not sell these instruments at teller windows or other areas where retail deposits are routinely accepted.

2175.0.2 PERMISSIBILITY OF UNINSURED ANNUITY SALES

The legal status of annuities under the Bank Holding Company Act is somewhat uncertain at the present time. The Office of the Comptroller of the Currency has authorized national banks to act as agent in the sale of annuities on the basis that variable-rate annuities are securities and fixed-rate annuities are financial investment instruments.[1] These determinations, however, have been challenged by insurance associations on the basis that annuities are insurance products and, therefore, may be sold by national banks only in a town of less than 5,000.[2]

State member banks generally have been permitted to engage in the brokerage of both variable- and fixed-rate annuities consistent with their general corporate powers. In order to engage in this activity without filing a formal application, staff has advised interested banks that the brokerage of annuities must be expressly authorized under state law (or by the state banking regulatory agency on a case-by-case basis) and constitute an activity incidental to the bank's banking activities.

The authority of state member banks to continue to engage in this activity, in the same manner and subject to the conditions discussed above, does not appear to depend on a resolution of the issues.[3] State member banks have been permitted to engage in general insurance agency activities since 1937,[4] and to engage in brokerage activities under the same limitations applicable to bank holding companies. In addition, the Board has determined that the nonbanking restrictions in the Bank Holding Company Act do not apply to the direct activities of banks owned by a bank holding company.[5]

The authority of bank holding companies to engage directly or through a nonbanking subsidiary in the sale of annuities has not yet been determined. In *Norwest Corporation*,[6] the Board considered a proposal by a nonbanking affiliate to engage in the sale of variable- and fixed-rate annuities. The Board concluded that, under the specific facts of that case, it was unnecessary to reach the question of whether the sale of annuities is an insurance agency activity because Norwest is one of a small number of bank holding companies entitled to act as agent in the

1. Interpretive Letter No. 331, April 4, 1985, *reprinted in* [1985–1987 Transfer Binder] Fed. Banking L. Rep. (CCH) ¶85,501; OCC Interpretive Letter No. 499 (February 12, 1990), *reprinted in* [1989–1990] Fed. Banking L. Rep. (CCH) ¶83,090. National banks are authorized to buy and sell securities for the account of customers and broker financial investment instruments.

2. *The Variable Annuity Life Insurance Company v. Clarke*, No. H-91-1016 (S.D. Tex. filed Apr. 16, 1991) ("NCNB litigation").

3. NCNB litigation.

4. Prior to 1937, the Board imposed as a condition of membership in the Federal Reserve System that a bank discontinue all insurance activities other than insurance activities in a town of less than 5,000. The purpose of this restriction was to conform insurance activities allowed for state member banks to those allowed for national banks.

5. *Merchants National Corp.*, 75 Federal Reserve Bulletin 388 (1989), *aff'd*, 890 F.2d 1275 (2d Cir. 1989), *cert. denied*, 111 S. Ct. 44 (1990).

6. 76 Federal Reserve Bulletin 873 (1990).

sale of any type of insurance pursuant to Exemption G of the Garn Act.[7]

2175.0.3 CHARACTERISTICS OF ANNUITY INSTRUMENTS

An annuity is an investment from which a person receives periodic payments based on earlier payments made to the obligor. Annuities are commonly underwritten by insurance companies, then marketed and sold either directly or through third parties, such as banks. Insurance companies retain the actuarial and underwriting risks on these annuities.

Annuities may be either variable or fixed-rate. An investor in a variable annuity contract purchases a share in an investment portfolio and then receives payments that vary according to the performance of the portfolio. A purchaser of a fixed-rate annuity contract, in contrast, receives a fixed-rate payment or minimum level of payments. Annuity payments can usually be received monthly, quarterly, semi-annually, or annually.

Variable- and fixed-rate annuities may be purchased in a single lump sum (''single premium'') or in periodic contributions (''flexible premium''). Minimum and maximum contributions to annuities vary among vendors. Some single-premium annuities have ''bail-out'' features which allow holders to withdraw all funds if the rate of return on the annuity contract falls below a specified rate.

The ability to take money out of an annuity prior to maturity varies by product, as does the imposition of a surrender penalty by the insurer when withdrawal occurs prior to maturity. When a penalty is imposed, the insurer generally calculates the penalty as a percentage of the annuity product's accumulated value. The penalty for withdrawal generally declines with the annuity's age. Normally, funds may not be withdrawn prior to the first anniversary date of the annuity.[8]

Annuities sold at depository institutions often include rate guarantees over the life of the instrument. They also frequently mature in one, three, or five years, similar to maturity ranges on certificates of deposit.

Insurance companies arrange for the sale of annuities on the premises of depository institutions in different ways. Some insurance companies approach banks directly. At other times, wholesalers (who market the products of a number of different insurance companies) may approach a bank. Depending on state restrictions on insurance activities, sales might be conducted by bank employees, employees of bank subsidiary insurance agencies, or by third-party insurance agents leasing space on the bank's premises.

Sales commissions on annuities vary by the type of annuity. Commissions earned on single-premium products generally vary from 4 percent to 6 percent, but they decline sharply when the product sold includes a ''bail-out'' provision. Wholesalers may also give retailers a commission when the annuity is renewed, based on the accumulated value of the annuity. Commissions in some instances are paid on a variable basis, rising as the volume of sales increases.

2175.0.4 IMPROPER MARKETING PRACTICES

Banks have become involved in the sale of uninsured annuities through marketing programs designed to appeal specifically to their retail customers. It is important that these programs not employ marketing practices that could mislead the bank's customers. For example, the use in annuities advertisements of terms such as ''CD,'' ''deposit,'' and ''interest plan'' to imply that the instruments are insured deposits would be inappropriate. Also, advertisements that prominently display the bank's name and logo in a way that suggests the product is an obligation of the bank are similarly inappropriate. Disclosure that the annuities are not federally insured and are not obligations of the bank should be displayed prominently in annuity contracts and related documentation, on printed

7. The Garn Act amended section 4(c)(8) of the Bank Holding Company Act to prohibit generally bank holding companies from engaging in insurance activities as a principal, agent, or broker with certain exceptions. Under the express language of the Garn Act, the sale of insurance is not ''closely related to banking'' and is not permissible for a bank holding company unless it qualifies under one of the seven specified exceptions (Exemptions A–G) in the Garn Act. Exemption G applies to a limited number of bank holding companies that received approval from the Board prior to January 1, 1971, to conduct insurance agency activities. In order to utilize Exemption G or any other Garn Act exemptions that may be applicable, the bank holding company must file an application and would be subject to the proposed restrictions through the application process.

8. If an investor withdraws tax-deferred income from an annuity before the investor is 59½ years old, the IRS levies a tax penalty on the person equal to 10 percent of the amount of tax-deferred income withdrawn. This penalty may be avoided only if the person reinvests annuity proceeds in another tax-deferred investment within 60 days of the withdrawal.

advices, and verbally emphasized in telemarketing contacts. Finally, personnel selling uninsured annuities should be distinguishable from bank employees conducting normal retail deposit-taking operations.

2175.0.5 INSPECTION OBJECTIVES

1. To review the marketing and sale of uninsured annuities sold by the bank holding company and its member banks, or those sold through a third party.
2. To determine whether the bank holding company and its banks have adequate policies and procedures in place and if they are monitored by the parent company.
3. To determine if, prior to agreeing to sell annuities, a comprehensive financial analysis is made of the financial condition of the annuities underwriter and whether products of only financially secure underwriters are sold.
4. To determine whether the contract and advertising and related documents disclose prominently that the annuities do not represent deposits or obligations of an insured depository institution and that they are not insured by the Federal Deposit Insurance Corporation.
5. To ascertain that annuities are not sold at teller windows or other areas where deposits are routinely accepted.

2175.0.6 INSPECTION PROCEDURES

1. Determine whether the bank holding company and its banks have adequate policies and procedures in place:

a. to assess the financial condition of the annuities underwriter;

Banking organizations engaged in the sale of annuities are expected to sell only products of financially secure underwriters. Prior to agreeing to sell annuities, a comprehensive financial analysis of the obligor should be performed and reviewed with the banking organization's directors. The policies should also include a program to evaluate the underwriter's financial condition at least annually and to review the credit ratings assigned to the underwriter by the independent agencies evaluating annuity underwriters.

b. to ensure that the marketing and sale of uninsured annuities is not misleading and is separated and distinguished from routine retail deposit-taking activities.

(1) With regard to the sale of annuities, determine whether the contract, advertising, and all related documents disclose prominently in bold print that the annuities:

(a) are not deposits or obligations of an insured depository institution; and

(b) are not insured by the Federal Deposit Insurance Corporation.

(2) State member banks should not sell annuity instruments at teller windows or other areas where retail deposits are routinely accepted. In assessing the adequacy of disclosures and the separation of the marketing and sale of uninsured annuities from the retail deposit-taking function, examiners should take into account whether:

(a) advertisements *do not* contain words, such as ''deposit'', ''CD'', etc., or a logo that could lead an investor to believe an annuity is an insured deposit instrument;

(b) the obligor of the annuity contract is prominently disclosed, and names or logos of the insured depository institution are not used in a way that might suggest the insured depository institution is the obligor;

(c) adequate verbal disclosures are made during telemarketing contacts and at the time of sale;

(d) retail deposit-taking employees of the insured depository institution *are not engaged* in the promotion or sale of uninsured annuities;

(e) information on uninsured annuities *is not* contained in retail deposit statements of customers or in the immediate retail deposit-taking area;

(f) account information on annuities owned by customers *is not* included on insured deposit statements; and

(g) officer or employee remuneration associated with selling annuities is limited to reasonable levels in relation to the individual's salary.

(3) If a bank allows a third-party entity to market annuities on depository institution premises, examiners should take into account whether:

(a) the depository institution has assured itself that the third-party company is properly registered or licensed to conduct this activity;

(b) depository institution personnel *are not* involved in sales activities conducted by the third party;

(c) desks or offices *are not* used to market or sell annuities, are separate and dis-

tinctly identified as being used by an outside party; and

(d) depository institution personnel *do not* normally use desks or offices used by a third party for annuities sales.

2. Determine that advertisements do not prominently display the bank's name and logo that suggests the product is an obligation of a BHC bank.

3. Determine whether the banks obtain a signed statement from the customer indicating that the customer understands that the annuity is not a deposit or any other obligation of the depository institution, that the depository institution is only acting as an agent for the insurance company (underwriter), and that the annuity is not FDIC insured.

Existing regulations permit banks and bank holding companies to engage in a wide range of securities activities in overseas markets. For a number of years these activities were not considered to be significant in the context of total bank and bank holding company assets. Indigenous rules and market practice served to constrain to a degree securities activities of U.S. banking organizations overseas.

Changes in local rules now make it possible for members of the London stock exchange to be wholly-owned by non-member companies and by year-end 1986 will allow stockbrokers to act as principals or market makers in securities. These new rules are expected to change significantly the complexion of the London securities market. In this context, U.S. banking organizations are making substantial investments in U.K. securities firms, and are also significantly expanding their securities business in other foreign and international markets.

The Board has expressed its concerns, in connection with an application by a banking organization to expand its securities activities overseas, that proper safeguards, limits, and controls will be exercised to protect the organization from undue risk. Applications generally state the methods through which the banking organization plans to control risk and establish oversight over securities operations. While these safeguards are initially evaluated at the time the application is made, nevertheless, examinations of bank holding companies and Edge corporations should incorporate an assessment of all overseas securities activities in order to determine the degree to which these activities conform to high standards of banking and financial prudence. The affiliation of a securities company, especially one engaged in corporate debt and equities transactions, with a banking organization raises a potential for conflict of interest and in some cases could pose substantial additional risk to the institution.

In those U.S. banking organizations where overseas securities trading and brokering are significant in scope or are prominent in the scale of the local market, examination procedures must incorporate an assessment of the controls, limits, and safeguards implemented by the organization to monitor and contain risk. Securities activities should be subject to the same degree of scrutiny and rigorous assessment of risk as bank lending activities. In addition, examiners should monitor the substance and nature of all transactions.

In particular, the following kinds of activities should be reviewed to determine whether they raise considerations of safety and soundness or otherwise do not conform to standards of prudence required of U.S. banking organizations:

- The degree of lending by a bank holding company to its securities affiliate, especially when loans are extended to support or enhance the obligations underwritten by the securities affiliate;
- The extent to which securities underwritten by an affiliate are purchased by the bank holding company as principal or trustee; and,
- The extent to which the parent is liable to an exchange for any losses incurred by the affiliate due to failure to deliver securities or settle contracts.